CONTENTS OF SUPPLEMENT.


PERSONAL ..... 1
Obituary ..... 1
ENGINEERING SOCIETIES. ..... 1
Coming Technical Meetings ..... 1
NEW PUBLICATIONS ..... 1
Trade Publications ..... 1
CONSTRUCTION NEWS:
Condensed List of Contracts Pending ..... 2
Railways ..... 2
Street and Electric Railways ..... 3
Electric Light and Power ..... 3
Bridges ..... 4
Buildings ..... 4
Water-Works ..... 5
Irrigation ..... 5
Sewerage ..... 5
Garbage Disposal and Street Cleaning ..... 6
Streets and Roads ..... 6
Manufacturing Plants ..... 6
Gas Plants ..... 6
Miscellaneous Contracts ..... 6
Contract Prices ..... 6
Engineering Material Prices ..... 8
INDUSTRIAL NOTES. ..... 8


## PERSONAL.

Capt. F. P. Brevier has been appointed Superintendent of the water-works of Mobile, Ala.

Mr. Gavin Nelson Houston, Jun. Am. Soc. C. E., formerly Assistant Engineer, has been appointed Superintendent of Water-Works of Nyack, N. Y., to take effect July 1.

Mr. William D. Cornish, of St. Paul, Minn., has been elected First Vice-President of the Union Pacific R. R., with headquarters in New York city, to succeed Mr. Oliver W. Mink, resigned.

Mr. A. A. Wirth has been appointed Assistant Engineer of Maintenance of Way of the Pennsylvania Lines West of Pittsburg, with headquarters at Louisville, Ky., to succeed Mr. William B. Blake, promoted.

Mr. Thomas B. Minister has been appointed Superintendent of Buildings of the Borough of Brooklyn, New York city, to succeed Mr. John Guilfoyle, whose appointment as Commissioner of Buildings was noted in our issue of June 9.

Mr. Bushrod W. Taylor, Engineer of Maintenance of Way of the Pennsylvania Lines West of Pittsburg, has been appointed Superintendent of the Louisville Division, with headquarters at Louisville, Ky., to succeed Mr. P. A. Bonebrake, transferred.

Mr. William B. Blake, Assistant Engineer of Maintenance of Way of the Pennsylvania Lines West of Pittsburg, has been appointed Engineer of Maintenance of Way, with headquarters at Louisville, Ky., to succeed Mr. Bushrod W. Taylor, promoted.

Mr. Charles S. Butts, civil engineer, is making a resurvey with a complete set of maps of the Lake Superior & Ishpeming Ry., with headquarters at Marquette, Mich. He was recently engaged on similar work on the Lake Erie & Western R. R., with offices at Indianapolis, Ind.

Mr. P. A. Bonebrake, Superintendent of the Louisville Division of the Pennsylvania Lines West of Pittsburg, with offices at Louisville, Ky., has been appointed Superintendent of the Indianapolis Division, with headquarters at Columbus, O., to succeed Mr. Frank G. Darlington, M. Am. Soc. C. E., resigned.

Mr. Dorsey Ash, who has been employed by the Metropolitan Water Board of Massachusetts on the construction of the Washusett Aqueduct, has resigned to take charge of the construction of a fortification and gun emplacements at Grover's Cliff, Winthrop, Mass., under Lieut.-Col. Mansfield, Engineer Corps, U. S. A.

Mr. Emil Swensson, M. Am. Soc. C. E., Chief Engineer and Superintendent of the Keystone Bridge Works, Carnegie Steel Co., Ltd., Pittsburg, Pa., was tendered a dinner, June 30, by the heads of the company's departments just prior to his sailing for Sweden, of which he is a native, after 18 years spent in the United States.

Mr. Nelson D. Miller has been appointed Chief Engineer of the Great Northern Ry., with headquarters at St. Paul, Minn., to succeed Mr. John F. Stevens, M. Am. Soc. C. E., whose resignation was noted in our last issue. Mr. Miller resigned the above position Jan. 7, 1895, to take charge of the engineering work on the Kaslo & Slocum Ry., then under construction.

Prof. William Dennis Marks, M. Am. Inst. E. E., President of the American Electric Meter Co., Philadelphia, Pa., has been elected President of the General Electric Automobile Co. of the same city. He was Professor of Dynamical Engineering in the University of Pennsylvania for a number of years. In 1887 he became engineer of the Edison Electric Light Co., of Philadelphia, and in 1889 was made Chief Engineer, and later President, of the Edison General Electric Lighting Co.

## OBITUARY.

Mr. J. R. Kerr, Resident Engineer of the new water-works at Augusta, Ga., died June 29.

Mr. Palmer J. Pillans, for many years City Engineer of Mobile, Ala., died June 22, aged 83.

Mr. Edward Gustine, contractor for water and gas works, of Keene, N. H., died July 4, aged 78.

## ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

INTERNATIONAL MINING CONGRESS.
July 6-9. At Salt Lake City. Secy., W. D. Johnson, Salt Lake City, Utah.

MONTANA SOCIETY OF ENGINEERS.
July 9. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
July 12. Secy., Wm. H. Searles, Case Library Bldg., Cleveland, O.

AMERICAN SOCIETY OF R. R. SUPERINTENDENTS.
July 13-14. Annual meeting, Alexandria Bay, N.Y. Secy., C. A. Hammond, Asbury Park, N. J.

AMERICAN HEATING AND VENTILATING SOCIETY.
July 15. Atlantic City, N. J. Secy., S. A. Jellett, 704 Arch St., Philadelphia, Pa.

ENGINEERS' CLUB OF MINNEAPOLIS.
July 18. Secy., H. E. Smith, 1620 S. E. 4th St., Minneapolis, Minn.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
July 19. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

WESTERN FOUNDRYMEN'S ASSOCIATION.
July 20. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
July 26 to 29. Annual convention at Detroit. Secy., C. W. Hunt, 220 W. 57th St., New York, N. Y.

WESTERN SOCIETY OF ENGINEERS.
Aug. 3. "Establishment of Street Grades," Chas. P. Chase. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

SOCIETY FOR THE PROMOTION OF ENGINEERING EDUCATION.
Aug. 18 to 20. Annual meeting at Massachusetts Institute of Technology, Boston, Mass. Secy., Albert Kingsbury, Durham, N. H.

PACIFIC COAST ELECTRICAL TRANSMISSION ASSOCIATION.—At the annual meeting of the Association held June 21 the following officers were elected for the ensuing year: President, W. Frank Pierce; Vice-President, Carrol M. Beal; Secretary, Geo. P. Low, and Treasurer, William Angus.

MONTANA SOCIETY OF ENGINEERS.—At the regular monthly meeting held June 11 Mr. Walter Harvey Weed, U. S. Geologist, delivered a lecture upon the geology of Butte, Mont. The lecture was illustrated by maps showing the various geological formations in and about this important mining center.

ENGINEERING ASSOCIATION OF NEW SOUTH WALES.—At the regular meeting of the Association, held at Sydney, May 12, Mr. F. Ernest Stowe read a paper entitled "Instrumental Calculations as Applied to Modern Engineering." The paper dealt with the application of the slide rule in various forms to the calculation of the horse power of engines and the various other quantities and forces used in engineering work.

INTERNATIONAL MINING CONGRESS.—The annual meeting of this organization is to be held at Salt Lake City, Utah, on July 6 to 9 inclusive. The programme as announced includes besides the routine business and a long list of entertainments and excursions two special committee reports, one regarding the establishment of a national department of mines, and the other regarding the revision and codification of the Federal mining laws, and the following special papers: "Coal and Coke," "Advances in Methods of Concentration.," "Relation of the Geological Survey to the Mining Industry," "Relative Merits of Cyaniding and Chlorination," "Mine Inspection," "History of Reduction of Smelting Costs," "Long Distance Transmission of Electric Power," "Fuel Cost in Pumping," "Recent Advances in Smelting," "A New Treatment of Low Grade Ore," "Copper," "Relations of Investors and Miners."

IRON AND STEEL INSTITUTE OF GREAT BRITAIN.—The following special transportation arrangements have been made for the members leaving England to attend the autumn meeting of the Institute to be held at Stockholm on Aug. 26 and 27:

A special steamer of over 3,000 tons will be sent by Dr. H. S. Lunn and Mr. Woolrich Perowne on an itinerary to suit the exact requirements of the members. This vessel will leave Newcastle-on-Tyne on Aug. 17, and will proceed by way of the Baltic Canal, Kiel and Wisby to Stockholm, where she will lie, and serve as a floating hotel, from Aug. 25 to Aug. 28. The return journey will be by way of Copenhagen, Gothenburg and Christiania. The cruise will occupy 19 days, and the fare will be nineteen guineas for berth in four-berth cabins. Dr. Lunn and Mr. Perowne have also arranged for the steamship "St. Sunniva," a 1,000-ton boat, to leave Leith on Saturday, Aug. 20, proceeding by way of Christiania to Stockholm, where she will lie Aug. 26, 27 and 28, proceeding from Stockholm to St. Petersburg, and returning by way of Copenhagen and the Baltic Canal. This cruise will take 24 days, and the fare will be 20 guineas each passenger in four-berth cabins; 25 guineas each passenger in two-berth cabins; and 35 guineas for the exclusive use of a two-berth cabin by one passenger. The Orient Steam Navigation Co., Ltd., have also rearranged the itinerary of their pleasure cruise No. 3 to the Baltic, so as to bring their steamship "Lusitania" (3,912 tons) to Stockholm on Aug. 25, and to keep her there until Aug. 28. The itinerary includes visits to Copenhagen, Wisby, Stockholm, Kronstadt, St. Petersburg, Kiel, and the Baltic Canal, and occupies 28 days, from Aug. 17 to Sept. 14, the fares being from 35 guineas exclusive of shore excursions, or from 55 guineas inclusive of shore excursions. Particulars of this cruise can be obtained from Messrs. Anderson, Anderson & Co., No. 5, Fenchurch Ave., London, E. C. Particulars of the other cruises can be obtained from Dr. H. S. Lunn, No. 5 Endsleigh Gardens, London, N. W.

## NEW PUBLICATIONS.

PROCEDURES RECOMMENDED FOR THE STUDY OF BACTERIA, with Especial Reference to Greater Uniformity in the Description and Differentiation of Species. Being the Report of a Committee of American Bacteriologists to the Committee on the Pollution of Water Supplies of the American Public Health Association. Submitted at the Meeting of the Association in Philadelphia, Pa., September, 1897. Paper; 6 × 9 ins.; pp. 47; illustrations and folding sheets giving forms for reports. Address any member of committee as follows: J. Geo. Adami, Chairman, McGill University, Montreal, Que.; A. C. Abbott, University of Pennsylvania, Philadelphia; T. M. Cheesman, College Physicians and Surgeons, New York city; Geo. W. Fuller, Bacteriologist to Commissioners of Water-Works, Cincinnati, O.; W. T. Sedgwick, Massachusetts Institute of Technology, Boston; Chas. Smart, U. S. Army, Washington, D. C.; Theobald Smith, Harvard University, Cambridge, Mass.; W. H. Welch, Johns Hopkins University, Baltimore, Md.

The general scope of this report is fully given in the title. While we do not pretend to pass judgment upon matters relating almost wholly to bacteriological methods we have no hesitation in saying that the names of the men composing this committee are in themselves a guarantee of the value of the report and that just this sort of co-operative work was needed and gives every promise of being highly beneficial. Recent progress in checking the spread of disease through water and sewage purification, disinfection and other means of prevention is largely indebteded to bacteriology and will so continue. Engineers stand ready to do whatever biologists point out as necessary in the line of public sanitation. Bacteriology is so new an art and so many workers of all classes of ability have taken it up that there is great need of co-operative work to place the methods followed and the results obtained on a truly scientific basis.

The over-zealous, to use the most charitable term available, must be repressed, especially in naming new species and announcing the isolation of typhoid germs from drinking water, and the careless and unmethodical must be urged to do better work.

THE TECHNOGRAPH, 1897-98.—Published annually by the Association of Engineering Societies of the University of Illinois; Champaign, Ill. Paper; 8vo.; pp. 146; illustrated; 50 cts.

The first paper in this number of "The Technograph," while addressed principally to architects, should be of interest to many engineers. It is entitled "Notes on Sketching," and shows the value of the ability to make a sketch, not necessarily artistic, but one which will be of use as an aid to memory if for nothing else. The introduction of amateur photography has tended to kill the art of sketching, but there are many matters of detail, which no photograph can show satisfactorily. Many of the private note books of the older engineers are full of valuable sketches giving information which could be given in no other way.

The other papers include "Standard Methods of Testing Paving Brick," and "The Shearing Strength of Rivet Steel," both by Prof. A. N. Talbot; "The Effects of Temperature on Insulating Materials" and "Electric Car Heaters," both by Prof. W. Esty; "The Buildings of the Electrical and Mechanical Engineering Laboratory," Prof. S. J. Temple; "The Design of Elevating and Conveying Machinery," J. V. E. Schaefer; "The Effect of Freezing Cement Mortar," A. C. Hobart; "The Central Heating, Lighting and Power Plant of the University of Illinois," Prof. L. P. Breckenridge; "Strength of Concrete of Various Proportions," R. B. Ketchum and F. W. Honens; "Specification Writing," Prof. J. M. White; "The Corrosion of Iron," Prof. S. W. Parr and A. E. Paul; "Survey of a Deep Coal Mine in Illinois," W. H. Tarrant; "Repairing Plaster of Paris Casts," C. R. Clark; "Repairs of Masonry Arch; Illinois Central R. R.," A. E. Harvey; "A Problem in Metallurgy," W. H. Kavanagh; "Simple Standard for the Precision of Level Circuits," Prof. Wm. D. Pence; "Impact Tests of Beams," D. C. Wray; "A Governor Indicator," A. H. Neurother; and "A Short Method for Railway Crossing Computations," L. K. Vial and R. B. Ketchum.

## TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1-2 x 6 ins.; 6 x 9 ins., and 9 x 12 ins.)

SOME LIGHTING PLANTS.—Walker Co., Cleveland, O. Pamph.; 10¼ × 7½ ins.; illustrated.

This pamphlet gives nine full-page half-tone illustrations of isolated plants using Walker apparatus. A brief description accompanies each picture.

VOLTMETERS, AMMETERS AND WATTMETERS.—Whitney Electrical Instrument Co., Penacook, N. H. Pamph.; 6 × 3¾ ins.; pp. 80; illustrated.

This small pamphlet tells about the electrical instruments manufactured by the Whitney Electrical Instrument Co.

STEAM AND OIL SEPARATORS.—The Cochrane Separator, Harrison Safety Boiler Works, Philadelphia, Pa. Pamph.; 5¾ × 7½ ins.; pp. 48.

The well-known Cochrane separator is now made in a great number of sizes and of different shapes. One recently built was 13 ft. high and 5 ft. in diameter. The pamphlet illustrates all the styles.

STREET IMPROVEMENTS AND GENERAL CONTRACTING.—City Street Improvement Co., Mills Building, San Francisco. Paper; 9 × 7 ins.; not paged; illustrated.

Most of this pamphlet is given up to a description of bituminous sand-rock paving materials and the bituminous rock mines of this company located in San Luis Obispo, Monterey and Santa Cruz Cos., Cal. Most of the balance is devoted to a detailed list of the paving, sewer

and other contracts executed by the company. An illustrated description of the Humboldt Bay Jetty System at Eureka, Cal., occupies two pages. This work was begun April 15, 1893, and it is expected that it will be completed next year. The above-named company has the contract. The government appropriation for the work was about $1,740,000.

SIGNAL AND INTERLOCKING PLANT. — National Switch & Signal Co., Easton, Pa. Paper; 7 x 10 ins.; pp. 35.

This beautifully printed pamphlet is a compilation of descriptions of certain devices and plants which have been published in the technical papers. It includes the interlocking plant of the State Line crossing, the use of the train-staff system for block working at single-track tunnels on a double-track road, and the electric block and mechanical release, as described in our issues of Jan. 20, Feb. 24 and May 12, respectively. There is also an article showing that under the electric train-staff system back flagging is not required.

WHITE-LEAD, PAINTS AND CHEMICALS.—Harrison Bros. & Co., Philadelphia, New York and Chicago. Boards; 9 x 6 ins.; pp. 96.

The historical review in this catalogue is a very interesting sketch of the growth of a great manufacturing establishment founded in 1793 by Mr. John Harrison, of Philadelphia. Mr. Harrison was the first maker of sulphuric acid in the United States, the first to concentrate the acid in platinum instead of glass retorts, and the first but one to make white-lead in this country. The works of this company have grown from the small establishment of 1793 to one covering 35 acres of ground at Gray's Ferry, in Philadelphia. The catalogue itself describes and prices the products of the present company. These include white-lead for various purposes, zinc white, the "Harrison" oil colors, paste oil colors, coach paints, distemper or fresco colors, stains, varnishes, dry paints, etc. Included with this pamphlet is another on the "Chemistry of Paints," which gives a very good idea of the methods of making paints and chemicals and concludes with a very practical treatise on the application of paints.

## CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

| Bids to be opened. | Work. | Place. | See Eng. News. |
|---|---|---|---|
| July 7. | Drainage work, | Cornwall, Ont. | June 16 |
| July 7. | Tow-boat service, | Cincinnati, O. | June 16 |
| July 7. | Jail building, | Irwinville, Ga. | June 16 |
| July 7. | Iron or steel bridge, | Kingfisher, Okla. Ter. | May 19 |
| July 7. | Sewers and water mains, | Lamberton, Minn. | June 23 |
| July 7. | Bridge, | Sprague, Wash. | June 23 |
| July 7. | Plans for sewer system, | Lancaster, N. Y. | June 23 |
| | Advertised, Engineering News, June 23. | | |
| July 7. | Heating and ventilation, | Charles City, Ia. | June 23 |
| July 7. | Channel work, | Barnstable, Mass. | June 30 |
| | Advertised, Engineering News, June 30. | | |
| July 7. | Telephone franchise, | Lexington, Ky. | June 30 |
| July 7. | Steel viaduct, | Jersey City, N. J. | June 30 |
| July 7. | Stone coping, | Smith's Landing, N. J. | June 30 |
| July 7. | Dynamo, etc., | Bay City, Mich. | June 30 |
| July 7. | School building repairs, | New York | June 30 |
| July 7. | Paving, | Buffalo, N. Y. | June 30 |
| July 7. | Asphalt paving, | Fort Wayne, Ind. | June 30 |
| July 7. | Church building, | Mifflinburg, Pa. | June 30 |
| July 7. | School building repairs, | St. Louis, Mo. | June 30 |
| July 7. | School building, | Wallsville, Utah. | June 30 |
| July 7. | Macadam road, | Kansas City, Mo. | June 30 |
| July 7. | Iron bridge, | Ivesdale, Ill. | July 7 |
| July 7. | Electric plant, | Morris Plains, N. J. | July 7 |
| July 7. | Electric lighting, | Sea Isle City, N. J. | July 7 |
| July 7. | Pipe sewers, | Espien, Pa. | July 7 |
| July 8. | Pile bridges (8), | Fargo, N. Dak. | July 7 |
| July 8. | Sewer pipe, | Charlottetown, P. E. I. | July 7 |
| July 8. | Electric plant, etc., | Eaton Rapids, Mich. | July 7 |
| July 8. | Concrete paving, etc., | New Haven, Conn. | July 7 |
| July 8. | Garbage disposal, | St. Louis, Mo. | July 7 |
| July 8. | Brick paving, | Portage, Wis. | July 7 |
| July 8. | Sewer pipe, | Detroit, Mich. | July 7 |
| July 8. | Bridge bonds, | Youngstown, O. | July 7 |
| July 8. | Water-works, | Cambridge Springs, Pa. | June 23 |
| | Advertised, Eng. News, June 23 and 30. | | |
| July 8. | Heating, etc., | Clarksville, Tenn. | June 23 |
| July 8. | Bridge, | Roseburg, Ore. | June 2 |
| July 8. | Bridges (2), | Farman, N. Dak. | June 9 |
| July 8. | Steel bridge, | Aberdeen, S. Dak. | June 16 |
| July 8. | Macadam road, | Windsor Locks, Conn. | June 30 |
| July 8. | Paving, etc., | Rochester, N. Y. | June 30 |
| July 8. | Sewers, | Le Sueur, Minn. | June 30 |
| July 8. | School building, | Bradford, Pa. | June 30 |
| July 8. | Macadamizing, etc., | East Hartford, Conn. | June 30 |
| July 8. | Macadam road, | Easton, Pa. | June 30 |
| | Advertised, Engineering News, June 30. | | |
| July 8. | Gravel road (18 miles), | Rockville, Ind. | June 30 |
| July 8. | Factory building, | St. Joseph, Mo. | June 30 |
| July 9. | Wafer pipe castings, etc., | Huntington, Mass. | June 30 |
| July 9. | Street bonds, | Cadiz, O. | June 30 |
| July 9. | Boiler house, | Washington, D. C. | June 30 |
| July 9. | Pipe sewers, | Des Moines, Ia. | June 30 |
| July 9. | Fire station, | Montreal, Que. | June 30 |
| July 9. | Grading and graveling, | Woodstock, Conn. | June 30 |
| July 9. | Street improvement supplies, | Washington | June 16 |
| | Advertised, Engineering News, June 16. | | |
| July 9. | Brick paving, etc., | Cleveland, O. | June 16 |
| July 9. | Water-works, | Morris, Minn. | June 16 |
| July 9. | School buildings, | Dayton, O. | June 9 |
| July 9. | Substructure, etc., | Cincinnati, O. | June 16 |
| July 9. | Asphalt paving, | Washington, D. C. | June 16 |
| | Advertised, Engineering News, June 16. | | |
| July 9. | Highway work, | Wapakoneta, O. | June 16 |
| July 9. | Post office, building, | Pottsville, Pa. | June 23 |
| July 9. | Hospital building, | Mendocino, Cal. | June 23 |
| July 9. | Street work, | Athens, O. | June 23 |
| July 9. | Dredging, | Waukegan, Ill. | July 7 |
| July 9. | Repairing bridges, | Weiser, Idaho | July 7 |
| July 9. | Pipe sewers, | Warren, Pa. | July 7 |
| July 9. | Dynamos, | Painesville, O. | July 7 |
| July 10. | Street bonds, | Burlington, Vt. | July 7 |
| July 10. | School building, | Rush City, Minn. | May 26 |
| July 10. | Asphalt paving, etc., | Spokane, Wash. | June 30 |
| July 11. | Water conduit, etc., | Parkersburg, W. Va. | June 30 |
| | Advertised, Eng. News, June 30 and July 7. | | |
| July 11. | Street improvements, | Lafayette, Ind. | June 30 |
| July 11. | Brick paving, etc., | Mishawaka, Ind. | June 30 |
| July 11. | Garbage disposal, etc., | White Plains, N. Y. | June 30 |
| July 11. | Pipe sewers, | Parkersburg, W. Va. | June 30 |
| | Advertised, Eng. News, June 30 and July 7. | | |
| July 11. | Crib bulkhead, | New York, N. Y. | June 30 |
| July 11. | Bridge, | Breckenridge, Minn. | May 19 |
| July 11. | Paving, | Salem, O. | June 16 |
| July 11. | Paving, | Toledo, O. | June 16 |
| July 11. | Electric light bonds, | Wapakoneta, O. | June 23 |
| July 11. | Hospital building, | Newark, N. J. | June 23 |
| July 11. | Brick paving, | Swanton, O | June 23 |
| | Advertised, Engineering News, June 23. | | |
| July 11. | Cement sidewalks, | South Bend, Ind. | June 23 |
| July 11. | Cedar paving, | Detroit, Mich. | July 7 |
| July 11. | Paving, | East Aurora, N. Y. | July 7 |
| July 11. | Bridges (2), | Brooke, Ont. | July 7 |
| July 11. | Building for school, | Springfield, Mass. | July 7 |
| July 12. | Road work, | Columbus, O. | July 7 |
| July 12. | Paving, | Sioux City, Ia. | July 7 |
| July 12. | Bridge, | Dayton, O. | July 7 |
| July 12. | Brick paving, | Troy, N. Y. | July 7 |
| July 12. | Macadam road, | Ridgefield, N. J. | June 23 |
| | Advertised, Eng. News, June 23 and 30. | | |
| July 12. | Road work, | Columbus, O. | June 23 |
| July 12. | Bridge and material, | Moscow, Idaho. | June 16 |
| July 12. | Boiler and engine houses, | Evansville, Ind. | June 30 |
| July 13. | Truss bridge, | Gettysburg, Pa. | June 30 |
| July 13. | Street work (1 street), | Hoboken, N. J. | June 30 |
| July 13. | Steel bridge, | Brookings, S. Dak. | June 9 |
| July 13. | Hospital building, | Agnew, Cal. | June 23 |
| July 13. | Bridge, | Towson, Md. | July 7 |
| July 13. | Gravel road, | Freehold, N. J. | July 7 |
| July 13. | Improving road, | Waterbury, Conn. | July 7 |
| July 13. | Asphalt paving, | Hartford, Conn. | July 7 |
| July 13. | School building, | Springfield, Mass. | July 7 |
| July 14. | Asphalt paving, | Spokane, Wash. | July 7 |
| July 14. | Fire engine, | Cleveland, O. | July 7 |
| July 14. | Water-works, etc., | Batesville, Ark. | July 7 |
| July 14. | Electric light plant, | Batesville, Ark. | July 7 |
| July 14. | Broken stone, etc., | New York | July 7 |
| July 14. | Brick paving, | Champaign, Ill. | July 7 |
| | Advertised, Engineering News, July 7. | | |
| July 14. | Gas lamps (300), | Ironton, O. | June 16 |
| July 14. | Electric lighting, | Ironton, O. | June 16 |
| July 14. | Paving (26,000 sq.yds.), | Champaign, Ill. | June 30 |
| July 14. | Court house, | Savannah, Mo. | June 30 |
| July 14. | Water tower, etc., | Chicago Junction, O. | June 30 |
| July 15. | Electric light plant, | Wynne, Ark. | June 30 |
| July 15. | Church building, | Scottdale, Pa. | June 30 |
| July 15. | Asylum buildings, | Huntington, W. Va. | June 30 |
| July 15. | Church building, | Wayne, Neb. | June 30 |
| July 15. | Water department supplies, | St. Louis, Mo. | June 30 |
| July 15. | Electric plant, | Lamar, Colo. | May 5 |
| July 15. | Electric plant, | Gaylord, Minn. | June 16 |
| | Advertised, Eng. News, June 16 and 23. | | |
| July 15. | Bridge, | Cincinnati, O. | June 23 |
| July 15. | Harbor work, | Goderich, Ont. | June 23 |
| July 15. | Post office building, | Akron, O | June 23 |
| | Advertised, Eng. News, June 23 and 30. | | |
| July 15. | Railway station, | Nashville, Tenn. | July 7 |
| July 15. | Asphalt paving, | Newport, R. I. | July 7 |
| July 15. | Wharf, etc., | Halifax, N. S. | July 7 |
| July 15. | Paving, etc., | Iowa City, Ia. | July 7 |
| July 15. | Apartment building, | Chicago, Ill. | July 7 |
| July 15. | Brick paving, | Binghamton, N. Y. | July 7 |
| July 15. | Retorts, | Hamilton, O. | July 7 |
| July 15. | Drain, | Coldwater, Mich. | July 7 |
| July 16. | Underground crossing, | Kingston, N. Y. | July 7 |
| | Advertised, Eng. News, July 7 and 14. | | |
| July 16. | Dredging, quay, etc., | Brooklyn, N. Y. | July 7 |
| July 16. | Sewers, | Washington, D. C. | July 7 |
| | Advertised, Engineering News, July 7. | | |
| July 16. | Bridge, | Norwalk, O. | June 23 |
| July 16. | Water pipe, | Montgomery, Ala. | June 23 |
| | Advertised, Eng. News, June 23 to July 7. | | |
| July 16. | Brick sewer, etc., | Muscatine, Ia. | June 16 |
| July 16. | County buildings, | Beverley, England | June 30 |
| July 18. | Iron bridge, | Birmingham, Ala. | June 30 |
| July 18. | Grading and paving, | Scottdale, Pa. | June 30 |
| | Advertised, Eng. News, June 30 and July 7. | | |
| July 18. | Removing wreck, | Philadelphia, Pa. | June 30 |
| July 18. | Weirs road, | Laconia, N. H. | June 30 |
| | Advertised, Eng. News, June 30 and July 7. | | |
| July 18. | Street work, | Union City, Ind. | June 30 |
| July 18. | Water pipe, (3,060 ft.), | Whiting, Ind. | June 30 |
| July 18. | Electric light plant, | Fitzgerald, Ga. | June 30 |
| | Advertised, Engineering News, June 30. | | |
| July 18. | Water-works, | Fitzgerald, Ga. | June 30 |
| | Advertised, Engineering News, June 30. | | |
| July 18. | Hospital building, | Toledo, O. | June 30 |
| July 18. | Street railway franchise, | Salinas, Cal. | June 23 |
| July 18. | Steel water tower, | San Jose, Cal. | July 7 |
| July 18. | Substructure, etc., | Muskegon, Mich. | July 7 |
| | Advertised, Engineering News, July 7. | | |
| July 18. | Jail building, | Woodstock, O. | July 7 |
| July 19. | Water-works, | Yale, Mich. | July 7 |
| | Advertised, Engineering News, July 7. | | |
| July 19. | School building, | Troy, N. Y. | July 7 |
| July 19. | Dormitory buildings (15), | Sonyea, N. Y. | July 7 |
| July 19. | Reservoir, | Delphi, Ind. | July 7 |
| July 19. | Bridge construction, | Chillicothe, O. | June 23 |
| | Advertised, Engineering News, June 23. | | |
| July 19. | Granite paving, | Rensselaer, N. Y. | June 30 |
| July 19. | Lighting fixtures, | Binghamton, N. Y. | June 30 |
| | Advertised, Eng. News, June 30 and July 7. | | |
| July 20. | Pipe sewers, | Davenport, Ia. | June 30 |
| July 20. | Bridges, etc. (11), | Chicago, Ill. | June 2 |
| | Advertised, Engineering News, June 2. | | |
| July 20. | Embankment, etc., | Lemont, Ill. | June 2 |
| | Advertised, Engineering News, June 2. | | |
| July 20. | Capitol building plans, | Phoenix, Ariz. | June 2 |
| July 20. | Heat regulating system, | Athens, O. | June 9 |
| July 20. | Truss bridge, | Rumford, Me. | July 7 |
| July 20. | Building elevator, | Baltimore, Md. | July 7 |
| July 20. | Heating, etc., | Clinton, Ia. | July 7 |
| July 20. | Water and light bonds, | Cass City, Mich. | July 7 |
| July 20. | Paving, | Tarentum, Pa. | July 7 |
| July 21. | School building, | Dayton, O. | July 7 |
| July 21. | Sewers, | Amsterdam, N. Y. | July 7 |
| July 21. | Pipe sewers (12 miles), | Goldsboro, N. C. | July 7 |
| | Advertised, Engineering News, July 7. | | |
| July 22. | Water-works, | Sparta, Minn. | July 7 |
| July 22. | Hydraulic dredge, | St. Louis, Mo. | June 23 |
| | Advertised, Eng. News, June 23 to July 14. | | |
| July 22. | Grading, road work, etc., | California, O. | June 30 |
| July 23. | Water-works, | Beatrice, Neb. | June 30 |
| July 23. | Cement sidewalks, | Washington, D. C. | June 23 |
| | Advertised, Engineering News, June 23. | | |
| July 23. | Paving, | Carbondale, Pa. | July 7 |
| | Advertised, Eng. News, July 7 to 21. | | |
| July 25. | Lighting bonds, | Lebanon, O. | July 7 |
| July 25. | Asphalt paving, | South Bend, Ind. | July 7 |
| July 25. | County building, | Riceville, Va. | July 7 |
| July 25. | School buildings, | Mansfield, O. | July 7 |
| July 25. | Water-works, | Winnipeg, Man. | June 2 |
| | Advertised, Eng. News, June 2 to 23. | | |
| July 25. | Timber, | Willetts Point, N. Y. | June 30 |
| July 26. | Electric light plant, | Sycamore, O. | June 30 |
| July 26. | Water-works, | Sycamore, O. | June 30 |
| July 26. | Electric light plant, | Yale, Mich. | July 7 |
| | Advertised, Engineering News, July 7. | | |
| July 27. | Church building, | Moro, Ore. | July 7 |
| July 27. | Paving, | Charleston, Ill. | July 7 |
| July 27. | Water supply, | Ridgewood, N. J. | June 23 |
| | Advertised, Engineering News, June 23. | | |
| July 27. | Bridge, | Carthage, O. | June 30 |
| July 28. | Masonry work, | Louisville, Ky. | June 30 |
| | Advertised, Eng. News, June 30 to July 21. | | |
| July 29. | Sluice gates, | Cincinnati, O. | July 7 |
| | Advertised, Eng. News, July 7 to 21. | | |
| July 30. | Brick paving, | Ashland, O. | July 7 |
| | Advertised, Eng. News, July 7 and 14. | | |
| July 30. | Iron bridge, | Cincinnati, O. | July 7 |
| July 31. | Water supply, | Tangier, Morocco | June 23 |
| Aug. 1. | Electric light plant, | Charleston, S. C. | June 30 |
| | Advertised, Eng. News, June 30 to July 21. | | |
| Aug. 1. | Power canal, | Ellensburg, Wash. | June 30 |
| Aug. 1. | Bonds ($8,000.) | Ellensburg, Wash. | June 30 |
| Aug. 1. | Jail building plans, | Syracuse, N. Y. | July 7 |
| Aug. 1. | Steel bridge, | Stockton, Mo. | July 7 |
| Aug. 1. | Iron bridges (3), | Wichita, Kan. | July 7 |
| Aug. 2. | Bonds, | Holly Springs, Miss. | July 7 |
| Aug. 2. | Road work, | Anaconda, Mont. | July 7 |
| Aug. 2. | Arc lighting, | Lebanon, Pa. | June 30 |
| Aug. 2. | Steel rails, | Ottawa, Ont. | June 16 |
| Aug. 3. | Levee work, | West Memphis, Ark. | June 30 |
| | Advertised, Eng. News, June 30 to July 28. | | |
| Aug. 6. | Dike, | York River, Va. | July 7 |
| | Advertised, Eng. News, July 7 to 28. | | |
| Aug. 6. | Dredging, etc., | Virginia. | July 7 |
| | Advertised, Eng. News, July 7 and 14. | | |
| Aug. 8. | Water pipe, etc., | Winnipeg, Man. | June 16 |
| | Advertised, Eng. News, June 16 to 30. | | |
| Aug. 9. | Torpedo boats, | Washington, D. C. | July 7 |
| Aug. 15. | Exhibition bldg. plans, | Glasgow, Scotland. | June 2 |
| Aug. 23. | Water pipe, | Coolgardie, West Australia. | June 2 |
| Aug. 31. | Custom house, | Guayquil, Ecuador | Apr. 21 |
| Sept. 1. | Battleships (3), | Washington, D. C. | June 23 |
| Sept. 1. | Drainage system, | Savannah, Ga. | June 30 |
| | Advertised, Eng. News, June 23 to Aug. 25. | | |
| Sept. 3. | Sewage pumping station, | Boston, Mass. | July 7 |
| | Advertised, Eng. News, July 7 and 14. | | |
| Sept. 12. | Hospital plans, | San Francisco, Cal. | Mar. 24 |
| Oct. 1. | Monitors (4), | Washington, D. C. | July 7 |
| Oct. 1. | School building (equipment), | St. Thomas, Ont. | July 7 |
| Oct. 24. | Markets, etc., | Belem, Brazil | Apr. 28 |
| Oct. 30. | School building, | Chehalis, Wash. | June 16 |
| Dec. 31. | Plans for station, etc., | Stockholm, Sweden | June 23 |
| No date. | Pump (4,000,000 gallons), | Austin, Tex. | June 30 |

## RAILWAYS.

ARKANSAS, LOUISIANA & SOUTHERN.—F. H. Drake, Pres., Minden, La., informs us that track is now being laid on this proposed line and that it is expected to run a through train soon on the road. The route is from Sibley, La., on the Vicksburg, Shreveport & Pacific R. R., to Stamps, Ark., a distance of 65 miles. M. M. Hunt has part of the contract work. L. N. Polk, Ch. Engr., Minden.

BRIDGEPORT & HELENA.—This company has been incorporated in Oregon, with a capital stock of $5,000,000, to construct a railway from Bridgeport, Ore., to Helena, Mont.

BRITISH COLUMBIA.—Press reports state that Mackenzie & Mann, Toronto, Ont., have accepted the subsidy of $4,000 a mile from the province of British Columbia, and have signed a contract by which they agree to commence work at once on the proposed line of railway from Glenora to Lake Tesilin. It is said that the country is quite level, and that no engineering difficulties of any magnitude will be found.

CENTRAL R. R. OF WEST VIRGINIA.—This company was incorporated in West Virginia June 29, with headquarters at Morgantown, W. Va., with a capital stock of $100,000, to construct a steam railway to connect Morgantown and Charleston, W. Va., a distance of about 150 miles. The incorporators are Thos. E. Davis and Geo. M. Whitescarver, of Grafton, W. Va.; R. T. Devries, Wheeling, W. Va.; Geo. C. Sturgis, Morgantown, W. Va.; J. W. Mason, Fairmont, W. Va.

CHICAGO GREAT WESTERN.—This company is reported to have awarded the following contracts: For changing four miles of grade at Kenyon, Minn., to William Stoddard, of St. Paul, Minn., at $20,000; for improving station grounds at Hayfield, Minn., and for 1½ miles of siding, to cost $12,000; for filling in three miles of wooden bridges, to cost $300,000; for seven stone culverts, to cost $25,000, to John Nevin & Son, St. Paul. H. Fernstrom, Ch. Engr., St. Paul.

CHICAGO, INDIANA & EASTERN.—The sections of this proposed railway from Swayzee to Converse, Ind., seven miles, and from Matthews to Muncie, Ind., 15 miles, are said to be under construction. H. U. Drew, Gen. Mgr., Fairmount, Ind.

CHICAGO, ROCK ISLAND & PACIFIC.—B. B. Brayton, Davenport, Ia., informs us that the Flick & Johnson Construction Co., of Davenport, has completed about one-half of the construction work on that portion of the line between Davenport and West Liberty. The work includes about 35 miles of grading for double track; the erection of iron girders and pipe culverts; masonry work and concrete piers and abutments, etc. The bridges include two double-track lattice bridges, 126 ft. long; four pairs of 44-ft. deck-plate girders; and three pairs of 33-ft. girders. It is expected to complete the work by September 15. W. G. Purdy, Chicago, Ill., Pres.; W. K. McFarlin, Supt. Maintenance and Construction, Davenport.

CHICAGO, ROCK ISLAND & TEXAS.—H. A. Parker, Vice-Pres. Chicago, Rock Island & Pacific Ry. Co., Chicago, Ill., informs us that nine miles of track were laid on June 28 on this proposed line of railway from Bridgeport to Jacksboro, Tex. It is expected to reach Jacksboro, 29 miles from Bridgeport (on the main line), by August 1. Pres., M. A. Law, Topeka, Kan.; Ch. Engr., W. B. Worrell, Bridgeport, Tex.

COLUMBUS, FULTON & NORTHERN. — Newman Cayce, Pres., Columbus, Miss., informs us that the larger part of this line has been surveyed and much of the right of way been obtained, but that no contracts have yet been offered. The proposed route is from Columbus, Miss., to Lexington, Tenn., via Aberdeen, Amory, Fulton, Burnsville and Savannah, a distance of 175 miles.

DETROIT & LIMA NORTHERN.—Reports state that track has been laid on this new road between St. John's and Bellefontaine, O., about 20 miles. This is a portion of the proposed extension of the Columbus & Northwestern from St. Mary's to Peoria, via St. John's and Bellefontaine, 50 miles. D. J. Casey, Ch. Engr., Bay City, Mich.

DULUTH & NORTHERN MINNESOTA.—Grading is said to have begun on the first six miles of this new logging railway from a point on Lake Superior north to open up the lumber district of St. Louis and Lake counties, controlled by Alger, Smith & Co., lumbermen, of Detroit, Mich. Preliminary surveys have been made for about 30 miles, and it is intended that the work of laying 60-lb. rails, with a standard gage, be done by the company direct. Pres., M. S. Smith, Detroit, Mich.; Gen. Mgr., John Millen, Black River, Mich.

INTEROCEANIC OF MEXICO.—Press reports from Mexico state that E. V. Sedgwick, Supt. of Motive Power, is in the market for ten locomotives and 1,000 freight cars. It is expected that the contracts for all this equipment will be placed some time this month from Mr. Sedgwick's office at the City of Mexico.

KANSAS CITY, ELDORADO & SOUTHERN.—Reports state that this company has executed a first mortgage to the Lincoln Trust Co., of St. Louis, for $450,000, to be used in completing the line. We have been advised that all the grading has been done and that the rails, ties, steel for bridges, etc., necessary to complete the line are upon the road. The contract is held by the Middle States Construction Co., Rialto Bldg., St. Louis, Mo., of which B. A. Aldrich is secretary.

KANSAS, OKLAHOMA CENTRAL & SOUTHWESTERN.—Press reports state that the directors of this company have awarded a contract to Coons & Co. for building the road from Bartlesville to Vernon, Tex. It is proposed to construct a railway from Cherryvale, Kan., to Vernon, Tex., through the central part of Oklahoma, a distance of about 350 miles. The Toledo Construction Co., of Toledo, O., has contracted to build a portion of the line. J. H. Bartles, Pres., Bartlesville, Ind. Ter.; F. B. Dallon, Ch. Engr., Independence, Kan.

LITTLE COAL RIVER.—The Little Coal River R. R. & Mining Co. was incorporated in West Virginia June 29, with a capital stock of $1,400,000, to construct a steam railway from St. Albans to Madison, W. Va., about 25 miles. The incorporators are H. J. Tondy, Huntington, W. Va.; J. P. Laflin, J. O. Lee, H. M. Green and A. R. Sheffer, all of New York.

MANISTIQUE & NORTHWESTERN.—C. E. Kelso, Secy., Manistique, Mich., informs us that rails have been purchased for an extension of this line from Scott's Camp to the Duluth, South Shore & Atlantic Ry.

MANSFIELD SHORT LINE.—Chas. W. French, Pres., Mansfield, O., informs us that the Crouch Construction Co., First National Bank Bldg., Chicago, Ill., which is building this line, has completed about five miles of grading, and that it expects to begin track-laying in August. The proposed route is from Shelby to Lucas, via Mansfield, O., 20 miles. Surveys have been made and the right of way is being secured. R. E. Harwood, Ch. Engr., Mansfield, O.

MISSISSIPPI, HAMBURG & WESTERN.—L. A. Cole, Pres., 100 William St., New York, informs us that ten miles of work have been completed on this new railway between Hamburg and Leland, Ark., on the Mississippi River, a distance of 40 miles. All the right of way has been obtained and the necessary capital secured. C. M. Gibson, Ch. Engr., Portland, Ark.

MONTEREY & MEXICAN GULF.—A. Monnom, Gen. Mgr., Monterey, Mexico, writes us that this company is in the market for six freight engines, three cabooses and 100 box cars of 60,000 lbs. capacity.

NORTHERN PACIFIC.—The contract for grading, bridging and ironwork on the Northern Pacific Ry. extension from Belmont to Hartney is said to have been awarded to J. D. McArthur, of Winnipeg, Man.

PACIFIC & ARCTIC.—John Hislop, Asst. Ch. Engr., Skaguay, Alaska, writes us that the Pacific & Arctic Ry. & Navigation Co. is now building a narrow gage (3 ft.) railway from Skaguay to navigable water on the Yukon. About 6,000 ft. of track is laid and four miles of grading completed and ready for track-laying. The location of the line will soon be completed to the summit of White Pass, and it is expected that trains will be running to Summit Lake or beyond in September. The work is being done by the Pacific Contracting Co., Dexter, Horton & Co., Bank Bldg., Seattle, Wash., and of which E. C. Hawkins is chief engineer and superintendent. The railway company was incorporated in West Virginia, March 27, with a capital stock of $1,000,000, by D. N. Rowan and G. W. Rowan, of Irvington, N. Y.; Webster Gillette, of New York, and others.

PONTOTOC & STARKVILLE.—This company has been incorporated at Mississippi to construct a railway from Pontotoc south to Starkville, 60 miles. It will practically be a continuation of the Gulf & Chicago line running from Middleton, Tenn., to Pontotoc, a distance of 62 miles. The building of this railway will give Memphis a shorter route to West Point, Columbus and other Mississippi towns via the Southern & Kansas City, Memphis & Birmingham lines, the Gulf & Chicago, and the proposed Pontotoc & Starkville Ry., and will open up a rich country in northeastern Mississippi.

ST. LOUIS, SILOAM & SOUTHERN.—It is announced that Hector D. Mackay, of St. Louis, Mo., who is the chief promoter of this proposed railway, has made all financial arrangements to construct the line at once from St. Louis to Fort Smith, Ark., a distance of about 300 miles, with a branch from Little Rock, Ark., to Pomona, Mo. The route has been surveyed and the line located. The International Construction & Improvement Co., of Fort Smith, Ark., which has the contract for building the road, was incorporated in Arkansas, June 24, with a capital stock of $1,000,000, by Jesse French, John L. French, H. D. Mackay, John Dooley and J. S. Drake.

SPRINGFIELD, LITTLE ROCK & GULF.—Reports state that Governor Jones, of Arkansas, has issued a proclamation annulling the Smith railway act passed June 26, 1896, which granted to this road 1,000 acres of state land, a mile for each mile of the main line and its branches that might hereafter be constructed, provided that the railway shall be completed to Fourche, La., Favre River, within twelve months from date of passage of the act. P. L. Dougherty, Ch. Engr., Springfield, Mo.

TALLAHASSE & SOUTHEASTERN.—The Florida Construction Co. is said to have 280 men at work constructing this proposed railway from Tallahassee to Gainesville, Fla. Grading is completed from Tallahassee to about Perry, and it was expected to begin track-laying on July 1, and to push the work as much as possible. R. L. Bennett, Vice-Pres., Tallahassee, Fla.

TEMPLE & SALADO.—Preliminary surveys are about completed for a line of railway between Temple and Salado, Tex., and it is said that a firm of railway contractors have made a bid to construct the 16 miles of road and to equip it with one full passenger train for $70,000.

TIONESTA VALLEY.—Crage & Tench, 61 Terrance, Buffalo, N. Y., have been awarded the contract for constructing the proposed Millstone extension of this line, which is in operation from Sheffield, Pa., south through a large timber territory. Work will begin at once. Pres., J. H. Horton, Sheffield.

MARSHALL, TIMPSON & SABINE PASS.—We are informed that the survey has been completed and all of the right of way obtained, except five miles, for an extension of this railway between Timpson and Carthage, Tex. Most of the necessary capital has been secured, and the contract for construction has been awarded to Garrison, Avery & Co., of Timpson. Seven miles of the line are now in operation, seven miles graded for ties and bridges and the remaining six miles are to be graded within 60 days. John Burkett, Ch. Engr., Kokomo, Ind.

TOLUCA & TENANGO.—E. W. Knapp, Master Mechanic, Box 59, Toluca, Mexico, informs us that the engineers are now in the field locating another extension of 15 kilometers (9.31 miles), from Tenango to Tejaloya, Mexico. The company will do its own work.

UNION, COVE & VALLEY.—This company was incorporated in Oregon June 24, with a capital stock of $25,000, to construct a standard gage railway from the station of the Union, Cornucopia & Eastern Ry. in Union to Cove, Ore., a distance of about 12 miles. It is the intention of the company to begin surveying the route at once. The grading, tieing and ironing of the road will be under the direction of Joseph Johnson, Supt. of Construction. It is expected to have the work completed by October 15. The directors of the new company are, E. P. McDaniel, M. B. Rees, J. F. Phy, J. M. Carroll, P. J. Taylor, L. B. Rinehart and Joseph Johnson.

WISCONSIN.—J. S. Cowan, Almond, Wis., informs us that contracts will probably be let for the construction of this line in the latter part of July. The proposed route is from Plover, on the Green Bay & Western Ry., to Almond, via Keene and Lone Pine, Wis., a distance of 16 miles. No surveys have yet been made, nor has the right of way been obtained nor the capital secured. W. P. Hopkins, Ch. Engr., Green Bay, Wis.

WYOMING & MISSOURI RIVER.—This company has been organized, according to reports, to construct a line to the Hay Creek coal fields at once. W. S. Heckert and Geo. S. Harris, Belle Fourche, S. D., are said to have received the contract for grading and ironing the road.

## STREET AND ELECTRIC RAILWAYS.

WHITMAN, MASS.—The selectmen, June 28, granted a franchise to the Whitman & Plymouth Electric Ry. Co. to build a line from this place to the East Bridgewater town line.

BATH-ON-HUDSON, N. Y.—It is reported that the Albany Ry. Co. will extend its tracks into this place.

ONEIDA, N. Y.—Geo. W. Chadwick, of Chadwicks, N.Y., is reported to be interested in the construction of an electric railway from this city to Sylvan Beach, through Durhamville. Irving, Wicks & Co., New York, are attempting to obtain the franchise for this work now owned by J. W. Warner, Oneida.

SIDNEY, N. Y.—Robt. Cartwright, of this place, has bought the Sidney & Franklin Electric R. R., at receiver's sale, for $225, being subject to a judgment for $202 and a $3,000 mortgage, according to reports.

SOLVAY, N. Y.—The Syracuse, Skaneateles & Moravian R. R. Co. has petitioned the village trustees for a franchise for an electric railway through this place.

WALLOOMSAC, N. Y.—The Bennington & Hoosick Valley Electric Ry. was opened July 4, from North Bennington, Vt., to this place.

WHITEHALL, N. Y.—Chas. I. Baker, Troy, is said to be interested in an electric railway from this place to Granville.

DOYLESTOWN, PA.—Surveys for the Doylestown Ry. have been made and a franchise has been requested. The company also proposes to make extensions later to Morrisville, Centreville and Yardley. Pres., Frank N. Booz.

EASTON, PA.—The Easton, Palmer & Bethlehem Electric Ry. Co. has awarded the contract for the construction of its line to the Worcester Construction Co., Worcester, Mass., and work has already begun. The power house and car barns will be erected at Butztown, according to report.

ERIE, PA.—The Erie Electric Motor Co. is planning to build an extension to its electric railway in this city to a point near the end of the public dock at the foot of State St.

FOREST CITY, PA.—The Carbondale Traction Co. has been granted a franchise to build its line in this place. The company is required to accept the franchise in 20 days and to have the road extended to South St. within six months.

NAZARETH, PA.—It is proposed to build an electric railway from Bethlehem to this place, at a cost of about $50,000.

SCHUYLKILL HAVEN, PA.—The town council has granted a franchise to the Schuylkill Haven & Orwigsburg St. Ry. Co. to construct an electric railway in this borough, to connect with the tracks of the Pottsville & Reading Electric Ry.

WEST CHESTER, PA.—A meeting of the stockholders of the Philadelphia & West Chester Traction Co. will be held Aug. 23 to authorize a mortgage indebtedness of $340,000, with which to construct an extension to this place along the West Chester Turnpike, 10 miles.

BALTIMORE, MD.—Baldwin & Pennington are the architects for the new car barn of the Consolidated Ry. Co. This company has purchased the uncompleted electric railway between Baltimore and Ellicott City from the Columbia & Maryland Electric Ry. Co. and after completing it will operate it in connection with its Edmondson Ave. line through to Ellicott City.

WASHINGTON, D. C.—Congress has passed a bill requiring the Brightwood Ry. Co. to remove its overhead wires on Kenyon St., from 7th to 14th, and authorizing it to equip the road with the underground electric system at an estimated cost of $150,000.——Contracts for the construction of the Washington, Westminster & Gettysburg Ry. are reported to have been awarded.

NEWPORT NEWS, VA.—It is reported that before the Newport News & Old Point Ry. & Electric Co. can operate its electric line in this city, it will be necessary for the city to build two bridges across the tracks of the Chesapeake & Ohio Ry. W. J. Payne, Richmond, is one of the chief promoters of the project.

WHEELING, W. VA.—Elias McConnaughy, Bridgeport, has been given the contract, according to reports, for the grading of the extension of the Wheeling St. Ry. to the fair grounds.

FERNANDINA, FLA.—J. E. Starke, of Jacksonville, and others, have applied to the city council, according to report, for a franchise to build a street railway in this city.

BOWLING GREEN, KY.—The Bowling Green St. Ry. Co. has been reorganized by the Fidelity Trust Co. which had a lien of $23,000 upon it when it went into the hands of a receiver several months ago. The property of the railway company is to be sold. T. H. Whayne, Pres., may be addressed.

BIRMINGHAM, ALA.—The Birmingham Ry. & Electric Co. and the Birmingham Traction Co. are said to have reached an agreement by which cars will soon be running on First Ave., which will be relaid with heavier rails.

VICKSBURG, MISS.—The contract for the construction and equipment of the Vicksburg R. R., Power, Light & Mfg. Co. is reported to have been let. The line will probably be in partial operation early in September. Secy., M. J. Mulvihill, of Vicksburg.

BATON ROUGE, LA.—Fire destroyed car barn and six cars of the Baton Rouge St. Car Co. July 24, resulting in a loss of $20,000; almost covered by the insurance. Traffic will be suspended for several months.

XENIA, O.—J. M. Wilson, the promoter of the Dayton, Spring Valley & Wilmington Traction Co., is endeavoring to obtain a franchise to operate a line on Detroit St.

EAST ST. LOUIS, ILL.—The St. Louis & Belleville Electric Ry., of this city, has increased its capital from $50,000 to $500,000, according to report. John Day, Pres.

MILWAUKEE, WIS.—The Murray Hill Land Co. has secured an injunction restraining the Milwaukee Light, Heat & Traction Co. from changing the grade on Wells St.——The Waukesha extension of the Milwaukee Ry. & Light Co. was opened June 25. John I. Beggs, Mgr.

OSHKOSH, WIS.—A. B. Ideson, Vice-Pres., writes us that the Oshkosh, Omro & Berlin Electrical Ry. Construction Co. has been organized to build an electric railway from this city to Berlin, 26 miles, passing through three or four villages. The company will endeavor to secure a private right of way, 15 ft. wide, adjoining the highway and will be ready to finance within 90 days. The officers are: S. W. Hollister, Pres.; A. B. Ideson, Vice-Pres.; W. J. Wagstaff, Secy.; J. Howard Jenkins, Treas., and J. K. Tillottson, Mgr.

MINNEAPOLIS, MINN.—F. W. Cappelen, City Engr., writes us that the Twin City Rapid Transit Co. is pushing work on its line and expects to have it completed and in operation in a short time from this city to St. Paul, by way of Como Park.

KANSAS CITY, MO.—The Metropolitan St. Ry. Co. has decided to operate its Ninth St. cable line from Grand Ave. to the western terminus by electricity, according to report. The company is welding the joints in the rails on East 12th St. and on 15th St., from Highland Ave.; much welding still remains to be done.——The Brooklyn Ave. St. Ry. Co. contemplates building a line on Grand Ave., from 13th St. to 3d St., according to report.——The Kansas City Electrical St. Ry. Co. has been organized to build a line from 11th St. and Grand Ave. to a point near Westport.

WICHITA, KAN.—It is reported that the Commercial Club, of this city, has appointed a committee to confer with the city council in regard to constructing a street railway, the franchise for which has been asked for by an eastern promoter. C. G. Cohn, J. O. Davidson, C. Aylesburg, C. H. Brooks, E. Vail and J. H. Black are the committee.——The franchise granted to W. Q. Church and associates to build a street railway has been annulled by the city council, according to report, owing to the time condition having elapsed.

DEVIL'S LAKE, N. DAK.—Allan Tompkins is reported to be interested in building an electric road to Chautauqua, S. Dak.

PINE BLUFF, ARK.—A site, 180 × 200 ft., has been secured for the power house of the projected electric railway in this city, and work has been commenced.

DENVER, COLO.—The board of aldermen has voted to give a franchise to the Denver City Ry. Co. allowing it to change its motive power from cable to electricity and to extend its line on certain streets. The supervisors have not yet confirmed the vote.——The residents of Montclair, a suburb of this city, have petitioned the city council to grant a 20-year franchise to the Colfax Electric Ry. Co. to permit it to extend its line to their locality.

AUSTIN, TEX.—E. A. Ellis and others are reported to be interested in building a street railway in this city.

OAKLAND, CAL.—The Oakland Transit Co. has applied for a franchise on 12th St. and Oak St., according to report.

PASADENA, CAL.—The council granted a hearing recently to the Terminal Ry. Co. on its application for a franchise to operate an electric railway in this city. T. E. Gibbon, Att'y.

SAN MATEO, CAL.—The San Mateo Electric Ry. is reconstructing its 30th St. branch from Ocean View to Holy Cross Cemetery and is double-tracking its 18th St. line, from Guerrero to Danvers, according to report.

HAMILTON, ONT.—The city is contemplating purchasing and operating the Hamilton St. Ry. and will submit the question to the vote of the rate-payers on July 27.

## ELECTRIC LIGHT AND POWER.

HOLYOKE, MASS.—J. J. Kirkpatrick, Cy. Engr., writes us that the committee appointed by the supreme court some time ago to appraise the value of the electric light plant, which it was voted to purchase, has not yet met. The plant has capacity for 250 1,200-c. p. arc lights.

SOMERVILLE, MASS.—Albion A. Perry, Mayor, writes us that at present no action is being taken by this city to secure or establish an electric light plant.

BELFORT, N. Y.—It is stated that Lafayette Wetmore, Martinsburg, N. Y., has purchased the grist mill site and water power at Belfort, 14 miles from Lowville. Mr. Wetmore proposes to build a plant at once to furnish 2,000 HP.

BUFFALO, N. Y.—J. G. White & Co., Baltimore, Md., have been awarded the contract for constructing a subway system in this city for the Buffalo General Electrical Works.

DOLGEVILLE, N. Y.—Jas. D. Feeter, of Little Falls, N. Y., is reported to have been appointed receiver for the Dolgeville Electric Light & Power Co.

ELMIRA, N. Y.—Geo. L. Gray, Alderman, writes us that the council has accepted a bid of the Elmira Illuminating Co. to light the streets for five years with 1,200-c. p. arc lights, at $80 a light a year. By the closing of this contract the question of building a municipal plant has been abandoned.

FULTONVILLE, N. Y.—H. W. Post, of the Cayadutta Generating Co., writes us that the company has about completed negotiations for water wheels, and will probably use the General Electric or Westinghouse generators, and will give the one or other the entire electrical contract for station and line equipment, etc. The plant will have a capacity for 50 2,000-c. p. arc and 1,000 16-c. p. incandescent lights.

HOMER, N. Y.—The Cortland & Homer Traction Co. has been granted a 5-year franchise for lighting this city.

MORRIS PLAINS, N. J.—Bids are asked by the board of managers until July 7 for furnishing and installing a plant, etc., at the New Jersey State Hospital at Morris Plains. Arch., Robt., C. Walsh, Morristown, N. J.

SEA ISLE CITY, N. J.—Bids are asked until July 7 for lighting the streets for 10 years with 80 32-c. p. incandescent lights. In addition to the city lighting there will be considerable commercial lighting. A. H. Sickles, Mayor, Sea Isle City, and 510 Minor St., Philadelphia.

LANCASTER, PA.—The Martic Water & Power Co. has leased the Columbia Dam from E. J. D. Cross for a term of 99 years for $75,000.

DURHAM, N. C.—The question of issuing $225,000 in bonds for the purchase of the plant of the Durham Electric Light Co. and water-works of the Durham Water Co., etc., will be voted upon Aug. 1.

FAYETTEVILLE, N. C.—The council is reported as considering the question of granting a franchise to a company for a plant and water-works.

LAFAYETTE, ALA.—It is stated that the council wants to purchase dynamos for 25 arc and 800 incandescent lights, etc. L. L. Torbert may be addressed.

PADUCAH, KY.—A consolidation of all the street car lines and electric light plants in this city has been made and a new company organized into which all the separate companies have been merged. The new bond issue and financial plan incidental to the reorganization was arranged by R. S. Vivian, Investment Broker, Portland Block, Chicago. The Paducah Ry. & Electric Light Co. was incorporated in June, with a capital stock of $200,000, by Geo. C. Thompson, T. J. Flournoy, Geo. C. Wallace and others.

COLUMBUS, O.—J. W. Jones, Supt. Deaf and Dumb Institute, writes us that an engineer has been appointed to prepare plans and specifications for the proposed plant. It will have a capacity for 12 arc and 1,200 incandescent lights; estimated cost, $7,000. The appropriation is made available after Feb. 15, 1899.

LEBANON, O.—Bids are asked until July 25 for the purchase of $20,000 of 5% electric lighting bonds, according to reports. R. B. Corwin, Village Clk.

PAINESVILLE, O.—Bids are asked until July 9 for furnishing two 60-light 2,000-c. p. arc dynamos, according to reports. E. D. Hartwell, Village Clk.

WELLINGTON, O.—It is stated that the following contracts were let June 24 for furnishing and constructing the plant and water-works, to cost $30,000: Electrical equipment, the Fort Wayne Electrical Corporation, Fort Wayne, Ind.; steam equipment, the Arbuckle-Ryan Co., Toledo, O.; stand pipe construction, the Standard Bridge & Boiler Co., Bellaire, O.; pipe distribution and pumps, T. S. & H. M. Brooks, Jackson, Mich. Bonds at 4% have been sold by the village for this plant and water-works.

TERRE HAUTE, IND.—Andrew J. Crawford, Terre Haute, has purchased the plant of the Terre Haute Electric Light & Power Co. for $40,000.

BELLAIRE, MICH.—This place voted June 20 to build a plant.

DETROIT, MICH.—M. E. Rasemann, 38 Buhl Block, is preparing plans for an addition to the plant of the Edison Illuminating Co.; estimated cost, $28,000.

EATON RAPIDS, MICH.—Bids are asked until July 8 for furnishing the machinery, etc., and installing a plant. The city proposes to contract for 30 or more arc lights for street lighting, the contract to be made for five years. Bids are requested to be made for 1,200 and 2,000 c.-p. arc lights, to be operated every night in the year from dusk to midnight. Bids should also include a schedule for commercial and residence incandescent lighting, to be operated every night during the year and during the whole of each night. H. L. Boice, Recdr.

GRAND RAPIDS, MICH.—Press reports state as follows: Another victory was won by the city June 25 in the struggle for a municipal plant. When the contracts were awarded for the plant recently, one of the bidders obtained an injunction restraining the city from executing the contract, on the ground that his was the lowest bid. Judge Burlingame on June 25 dissolved the injunction as the city charter provides that the board may award the contracts to any responsible bidders and not necessarily to the lowest. This will probably end all the litigation and the plant will now be built.

YALE, MICH.—Bids are asked until July 26 for furnishing and constructing a plant, as stated in our advertising columns. E. F. Fead, Clk.

WEST SUPERIOR, WIS.—The American Steel Barge Co., it is reported, will soon begin the construction of a new stone and brick power house, etc., to cost about $50,000.

ADA, MINN.—It is reported that Dr. Stuart is considering the question of building a plant.

MINNEAPOLIS, MINN.—The Minneapolis General Electric Co. is making an extension to its underground conduit system of about a mile of conduit. It is using the McRoy Vitrified Clay Conduit and laying from 4 to 16 ducts.

RICEVILLE, IA.—The construction of a plant is proposed, according to reports.

WATERTOWN, S. DAK.—L. D. Lyons writes us that nothing has yet been done with regard to the proposed plant. The city is at present moving slowly with the question.

KANSAS CITY, MO.—C. S. Sweetland, of the electric light company, of Kansas City, Kan., and R. J. Ingraham have applied for a franchise to supply this city with cheaper electric lights. The power will be transmitted from the plant at Riverview, which plant it is proposed to enlarge.

MOUNT GROVE, MO.—We are informed that the Star Roller Mills will want a 100-light dynamo for its new plant at once.

BATESVILLE, ARK.—Bids are asked until July 14 for furnishing the machinery and for constructing the plant and water-works; estimated cost, $25,000. Engr., Owen Ford, Security Bldg., St. Louis, Mo.

BUTTE, MONT.—Press reports state that liens have been brought against the Montana Power Co. for $54,955. The company was organized some time ago by St. Paul parties to furnish power, light and water to the mines, etc. It is probable that the works are not yet completed.

NEW WHATCOM, WASH.—It is reported that the electric plant and the mill of the Bellingham Bay Improvement Co. were destroyed by fire June 28, causing a loss of about $400,000. The electric light plant is said to have had a capacity for 200 arc lights. Mgr., C. L. Anderson.

OAKLAND, CAL.—T. C. Bullock, of the St. and Electric Co., has applied for a 50-year franchise for transmitting electric power from the Blue Lakes, Amador county, to this city.

WALLACE, IDAHO.—The Wallace Mfg., Electric & Water Co., it is reported, has completed plans for a new power station to be 36 × 73 ft. A 150-HP. engine will be put in. The station, it is expected, will be completed by Sept. 1.

SANTIAGO DE CHILI, CHILI.—It is reported that a company has been formed at Berlin, Germany, under the name of the Electric Power Co. of Santiago de Chili, with a capital stock of 24,000,000 marks, of which Wernher, Beit & Co., of Berlin, take as much as 12,000,000 marks, while the balance is taken in equal proportion by the Societe Generale d'Electricite. Part of the capital will be offered for subscription in England. Extensive electrical undertakings in Chili are soon to be started by the company.

NEW COMPANIES.—Standard Electric Vapor Motor Co., New York; $50,000; S. W. Warner, E. L. Warner, W. M. Warner, Yonkers.

Lima-Honoeye Electric Light Co., Honoeye Falls, N. Y.; $125,000; H. H. Sitoll, R. L. Fryer, J. C. Conway, P. P. Miller, H. W. Box, A. L. Williams, A. M Holdin, H. C. Gilbert, Clarence McGregor, Buffalo.

Salem Electric Co., 93 Market St., Salem, N. J.; $50,000, with $15,050 paid in; John M. Carpenter, Wyatt W. Miller, Jr., Robt. Gwynne, Henry Kirk.

Port Chester Electric Lighting Co., Port Chester, N. Y.; $50,000; to operate in the towns of Westchester county; William L. Ward, Addison Johnson, Port Chester; William E. Ward, Rye, N. Y.

United States Light, Water & Power Co., 222 Washington St., Jersey City, N. J.; $125,000; F. W. Kalbfleisch, W. Curry, Brooklyn; George Weldon, Summit Ave., Jersey City. The company will purchase water-works, operate them and build electric light and power plants.

Illinois Power Co., Louisville, Ky.; $50,000; Robert E. Woods, H. S. Brashear, C. C. Boswell, D. E. Coulter, Louisville; R. A. Brashear, Gas City, Ind.

Cayadutta Electric Generating Co., Fultonville, N. Y.; to build a power plant and dam on Cayadutta Creek, near Sammonsville; a plant for furnishing 800 incandescent and 50 arc lights; A. Z. Wemple, Dr. H. W. Post, Fultonville; J. S. Wilson, Fonda, N. Y.

Ephrata Electric Co., Ephrata, Pa.; $15,000; F. E. Bailey, Philadelphia; A. W. Mentzer, Treas.; H. G. Mentzer, Ephrata; S. N. Bailey, Dillsburg, Pa.

North Jersey Light & Power Co., Montclair, N. J.; $15,000, with $1,050 paid in; Wm. T. Francisco, Albert C. Williams, Harry M. Warren, Montclair.

Beacon Light Co., three companies to operate in Ridley Park, Darby and Glenolden, Pa.; $1,000, with $100 paid in; J. Engle Cochran, Jr.,Treas., 704 E. 14th St., Chester, Pa.; Geo. C. Hetzel, Ridley Park, Pa.; Ernest H. Davis, Brooklyn, N. Y.

Albion Power Co., Albion, N. Y.; $50,000; Raymond B. Johnson, Buffalo; S. T. Church, Albert Culver, Albion; W. C. Johnson, F. A. Dudley, Niagara Falls, N. Y.

Rocky Mountain Power Co., Denver, Colo.; $500,000; to operate in Arapahoe, Boulder, Jefferson, Clear Creek and Gilpin; Mina S. Page, J. G. O'Bryan, C. E. Rich, R. C. Bogy, A. C. Foster.

## BRIDGES.

RUMFORD, ME.—Bids are asked until July 20 for constructing a steel truss bridge, 198 ft. long and 20 ft. wide, over the Androscoggin River, at Rumford Falls, to cost about $16,000. Chas. A. Mixer, Engr., Rumford Falls; J. H. Martin, First Selectman.

NEW CASTLE, N. H.—Plans have been completed by Dudley & Doherty, Engrs., Manchester, for the construction of three bridges, on the proposed Ocean Boulevard, over Rye Harbor and Hampton River.

BUFFALO, N. Y.—The board of public works will soon ask bids for the construction of a bridge over the Buffalo River at Seneca St. Frank W. Goethoefer, Cy. Clk.

HYDE PARK, N. Y.—D. Cuozzo, 150 Nassau St., New York, has commenced work on the new masonry arch bridge of 70-ft. span across Crum Elbow Creek on the New York & Albany Post Road, and retaining walls for the road embankments, for F. W. Vanderbilt and the town of Hyde Park, jointly; estimated cost, about $13,000, of which Mr. Vanderbilt shares three-fourths. Owen Morris, Engr. Hyde Park.

CAMDEN, N. J.—The following bids were received June 29 for constructing a steel bridge over Cooper's Creek at State St., as advertised in Engineering News. J. J. Albertson, County Engr.: Owego Bridge Co., Owego, N. Y., $23,000; Groton Bridge & Mfg. Co., Groton, N. Y., $[illegible]; B. F. Sweeten & Son, Camden, N. J. (accepted), $22,776.

TUCKAHOE N. J.—J. C. R. Smith, Clk. Com. Bd. Freeholders, Ocean View, informs us that the following bids were received June 28 for a steel bridge 120 ft. long over the Tuckahoe River, as advertised in Engineering News. F. R. Long, Engr., 320 Broadway, New York:

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| Wrought Iron Bridge Co., Canton, O. | $4,213 |
| New Jersey Steel & Iron Co., Trenton, N. J. | 4,675 |
| New Columbus Bridge Co., Columbus, O. | 4,300 |
| King Bridge Co., Cleveland, O. | 5,750 |
| Horseheads Bridge Co., Horseheads, N. Y. | 4,248 |
| Nelson & Buchanan, Chambersburg, Pa. (accepted). | 3,990 |
| Canton Bridge Co., Canton, O. | 4,175 |
| Berlin Iron Bridge Co., East Berlin, Conn. | 4,590 |
| F. R. Long & Co., New York | 5,100 |
| Toledo Bridge Co., Toledo, O. | 5,750 |
| Bracket Bridge Co., Cincinnati, O. | 3,998 |
| Youngstown Bridge Co., Youngstown, O. | 5,350 |
| Groton Bridge & Mfg. Co., Groton, N. Y. | 4,430 |
| Champion Bridge Co., Wilmington, O. | 4,375 |
| Owego Bridge Co., Owego, N. Y. | 5,150 |

TOWSON, MD.—Bids are asked until July 13 for constructing an iron bridge 116 ft. long and 16 ft. wide, on stone foundation. B. H. Mays, Engr., Philopolis; C. H. Callings, Ch. Clk. County Comrs, Baltimore.

NEWPORT NEWS, VA.—The council has passed an ordinance authorizing the issue of $40,000 in bonds for the construction of three bridges over the Chesapeake & Ohio Ry.

SPRINGFIELD, TENN.—Bids will soon be asked for the construction of an arch bridge across Black Branch. Address Mayor Bell or Alderman McMurray.

CINCINNATI, O.—Bids are asked until July 30 for constructing an iron truss bridge and substructure, in Colerain township. Eugene L. Lewis, County Audr.

DAYTON, O.—Bids are asked until July 12 for constructing a bridge over the Great Miami River, according to reports. A. G. Feight, County Audr.

LISBON, O.—C. H. Smith, Gen. Mgr., Pittsburg, Lisbon & Western Ry. Co., Lisbon, informs us that it is proposed to construct two new bridges, of stone and steel; estimated cost, $4,500.

NEW PHILADELPHIA, O.—New bids will be asked by the county commissioners for the construction of an iron bridge over the river at Bicktown, to cost about $8,000.

YOUNGSTOWN, O.—Bids are asked until July 8 for the purchase of $90,000 of 4½% bridge bonds. C. F. Brenner, County Audr.

DETROIT, MICH.—The Detroit & Lima Northern Ry. Co. will apply to the county supervisors on July 29 for permission to construct a 102-ft. draw-span plate girder bridge over the Ecorse River, to replace the present structure. J. R. Megrue, Vice-Pres. and Gen. Mgr., Detroit.

DETROIT, MICH.—Commissioner Kallman, Bd. Pub. Wks., has written Mayor Maybury to urge the construction of a wider bridge from Owen Park to Belle Isle; $30,000 was left over from last year's appropriation.

MUSKEGON, MICH.—Bids are asked until July 18 for building a bridge over Muskegon Lake and for the substructure of three iron bridges, as described in our advertising columns. J. Bierma, Chn. County Comrs.

IVESDALE, ILL.—Bids are asked until July 7 for constructing an iron bridge 40 × 14 ft. Ira O. Baker, Engr., Champaign, Ill.

SIOUX CITY, IA.—J. M. Lewis, Acting Cy. Engr., informs us that a contract has been awarded to C. E. H. Campbell, Council Bluffs, for constructing a 100-ft. span steel bridge over Floyd River, on Charles St.

FARGO, N. DAK.—Bids are asked until July 8 for constructing eight pile bridges, from 30 to 50 ft. long. O. J. Olson, County Audr.

TOPEKA, KAN.—S. S. McFadden, Cy. Clk., informs us estimates have been submitted for the construction of a pile bridge at Lake St., to cost about $1,251. Bids have not yet been asked.

WICHITA, KAN.—Bids are asked by the county clerk until Aug. 1 for constructing three iron bridges; estimated cost, $650, $850 and $900 each. R. H. Brown, Des. Engr., Wichita.

STOCKTON, MO.—Bids are asked until Aug. 1 for the construction of a steel bridge about 112 ft. long, on stone foundation. Address H. W. Engiman, Bear Creek, Mo.

CHEHALIS, WASH.—The county commissioners have decided to construct two bridges across the Chehalis River this summer, one at Claquato, to cost about $3,500, and at Centralia, to cost about $10,000.

WEISER, IDAHO.—Bids are asked until July 9 for repairing the Middle Fork wagon bridge, consisting of 112 ft. of trestle approach. I. F. Smith, County Clk.

BROOKE, ONT.—Bids are asked until July 11 for constructing two bridges, according to reports. Address L. Lindsay.

## BUILDINGS.

BATH, ME.—A fire in this city July 4 destroyed a number of buildings, causing a reported loss of $[illegible].

BARRE, VT.—All bids for erecting a new city hall building have been rejected owing to the high figures. It is likely that the granite part of the present plans will have to be omitted or an extra $10,000 added to the original appropriation.

PITTSFIELD, MASS.—The contract for rebuilding the American House is stated to have been awarded to Dodge & Devanney, of this city, at a cost of about $60,000.

SPRINGFIELD, MASS.—Bids are asked until July 11 for the erection and plumbing of new outbuildings for the Elm St. school. Arch., F. R. Richmond; also until July 13 for the erection of the Brightwood school building. Arch., B. Hammett Seabury, Gill's Block. C. E. Brown, Chn. Cy. Property Com.

NEWPORT, R. I.—The following bids were received June 28 for the erection of a naval hospital for contagious diseases at the U. S. naval station at Newport: Wm. F. Wilber & Frank E. Manchester, $9,834; James M. Gill, $9,842 (informal). As all bids were in excess of the appropriation no award will be made.

BROOKLYN, N. Y.—George Mertz & Son, of Port Chester, N. Y., are said to have received the general contract for the $30,000 residence, 72 × 98, to be erected at 99th St. and Shore Road for Kate M. Johnson, 268 23d St. Archs., Little & O'Connor, 18 West 34th St., New York. ——Henry J. Brown & Son, 1534 Fulton St., have been awarded the mason, carpenter and iron contract, and James Keenan, Fulton St., near Grand Ave., has the plumbing contract for the alterations to the building at Throop Ave. and Hancock St. for Theodore Kruger. Archs., Dodge & Morrison, 41 Wall St., New York.

LITTLE FALLS, N. Y.—Contractor Dove, of Little Falls, is said to have been awarded the contract for the construction of the new high school building, exclusive of heating, plumbing and ventilating, at $55,589.

NEW YORK, N. Y.—Plans have been filed by Smith & Raffler, 130 East 86th St., for a 5-story brick flat and store building at 107th St. and Manhattan Ave., to cost $140,000. Archs., Neville & Bagge, 217 West 125th St.; by Eaton & Mains, for the Methodist Book Concern, for an 8-story brick business building at 4 West 20th St., to cost $50,000. Archs., E. H. Kendall; by P. J. Herter, 1032 Lexington Ave., for two 5-story brick flat and store buildings at 433 and 435 West 24th St., to cost $50,000. Archs., P. Herter & Son; by Rachel Weinstein, for two 6-story brick flat and store buildings at 50 and 52 Lewis St., to cost $50,000; Archs., Horenburger & Straub, 122 Bowery, by Julius and Gus J. Fleischman, 19 West 124th St., for four 5-story brick flat buildings at 5th Ave. and 118th St., to cost $70,000, and for three 5-story flat buildings on 118th St., near 5th Ave. Arch., Geo. F. Pelham, 563 5th Ave.; by Bernard Havanagh, 409 West 147th St., for six 4-story brick flat buildings on Brook Ave., near 149th St., to cost $60,000. Arch., John P. Walther, 205 East 125th St.

SCHENECTADY, N. Y.—The Van Dorn Iron Works, of Cleveland, O., has received the contract for erecting the new county jail building, and John McEneroe, of Schenectady, will build the mason work. Contracts have not yet been awarded for heating and ventilating.

SONYEA, N. Y.—Bids are asked by the managers of the Craig Colony for Epileptics until July 19 for the construction of 15 dormitory buildings and a superintendent's residence. Archs., Carrere & Hastings, 28 East 41st, St., New York.

SYRACUSE, N. Y.—Plans and specifications are asked by the supervisors of Onondaga county until August 1 for improvements and additions to the county penitentiary and jail buildings. Address Ray B. Smith, 618 Kirk Block, Syracuse.

TROY, N. Y.—Bids are asked until July 19 for the erection of a new public school building in this city. E. Ogden Ross, Secy. Contracting Board.——Plans have been prepared for a new 5-story brick addition to the Windsor Hotel, for J. T. Quackenbush, to cost about $18,000. Arch., E. W. Loth, 253 Broadway.——An addition will be erected to the Troy "Times" Building, at 3d St. and Broadway, to cost about $35,000. Arch., M. F. Cummings & Son, Times Bldg.

NEW BRUNSWICK, N. J.—Plans have been accepted for a 2-story brick and stone 12-room school building, 73 × 124 ft., to be erected on French St. We are informed that bids will soon be asked. Otto Stillman, Chn. Bldg. Com.; Geo. K. Parsall, Arch., 86 Church St.

ALLEGHENY, PA.—The Third Ward school board has awarded the contract for erecting new school buildings at North Ave. and James St. to S. H. McCain, of Allegheny, at $109,690. Work will begin about July 1.

ANNAPOLIS, MD.—C. R. Parlett, of Norfolk, Va., has been awarded the contract for erecting four double dwelling houses for the Naval Academy at this place, at $53,261. Morrow Bros., of Baltimore, were the next lowest bidders at $56,135.

BALTIMORE, MD.—Bids are asked until July 20 for erecting a new elevator in the City Hall; deposit required, $500. Everett J. Dowell, Inspector of Bldgs.

WESTMINSTER, MD.—Plans are said to have been accepted for a new bank and office building to be erected at this place. Arch., J. A. Hunter, Hagerstown, Md.

WASHINGTON, D. C.—A bill has been favorably reported to the Senate authorizing the purchase of three squares, 227,157 sq. ft., north of the Congressional Library and east of the Capitol, as a site for the proposed Supreme Court Building.——Hornblower & Marshall, 1509 H St., N. W., have prepared plans for a new building of

Law and Diplomacy to be erected on H St., near 15th St., by the Columbian University.——An appropriation of $50,000 has been made for the purpose of purchasing a site and beginning the construction of a manual training school for the first eight divisions, the commissioners being authorized to contract for the construction of the entire building at a cost not to exceed $125,000.——Fifty thousand dollars have been appropriated for the construction of two hospital buildings for minor contagious diseases, one on the grounds of the Providence Hospital, the other on the grounds of the Garfield Memorial Hospital. ——The following bids were received by the supervising architect June 30 for repairs to the heating and power plant, etc., of the U. S. Treasury, the Winder and Marine Hospital (Butler) buildings at Washington:

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| Zellers & Co., Washington, D. C. | $16,065 | 70 days |
| Phila. Steam Heating Co., Washington | 13,445 | Sept. 15 |
| E. Keeler & Co., Williamsport, Pa. | 11,850 | 65 days |
| Wallace & Stebbens, Baltimore, Md. | 16,248 | Sept. 15 |
| G. A. Suter & Co., New York | 17,342 | " |
| Bromell, Schmidt & Co., York, Pa. | 12,525 | " |
| E. Rutzler, New York | 16,693 | " |
| Blake & Williams, New York | 14,175 | " |
| Edward P. Bates, Albany, N. Y. | 31,155 | 79 days |

RICEVILLE, VA.—D. B. Petty informs us that bids will be received until July 25 for a fireproof county clerk's office. Address W. B. Sheppard, Chatham, Va.

NASHVILLE, TENN.—Bids are asked until July 15, according to press reports, for the construction of the new union railway station for the Louisville & Nashville Terminal Co. Pres., Major E. C. Lewis.

BOURNEVILLE, O.—Elmer E. Crone, Roxibel, O., was awarded the contract June 25 for erecting a new school building at Bourneville at $1,617.

DAYTON, O.—Bids are asked until July 21 for the erection of an 8-room addition to the 17th District school building. Clk., Wm. G. Haeussler.

MANSFIELD, O.—Bids are asked until July 25 for erecting certain additions to the East 4th St. and the Bloom St. school buildings. Chas. B. Jameson, Clk. Bd. of Education.

WOODSTOCK, O.—Bids are asked until July 18 for erecting a council chamber and jail. Minard Sessions, Village Clk.

CHICAGO, ILL.—Bids are asked until July 8 for the plaster, marble, bronze, iron and other finish for the engine room of the Chicago Public Library. Secy., W. B. Wickersham.——Bids are asked until July 15, according to reports, for erecting a 3-story apartment building on Calumet Ave., near 61st St., to cost about $40,000. Arch., Henry L. Newhouse, 4630 Prairie Ave.——Reports state that Harper Bros., mason contractors, 3635 5th Ave., contemplate the erection of a 4-story brick and stone apartment building at Indiana Ave. and 58th St., to cost about $30,000.

WAUSAU, WIS.—Reports state that the following bids have been received for the erection of the high school building. Archs., Van Ryne & De Gelleke, Milwaukee, Wis.: Fred. W. Krause, Wausau, $39,800; John Miller, Wausau, $43,380; John Andreres, Wausau, $43,344; Hackworthy Construction Co., Appleton, Wis., $49,000; Chas. Getzkow, Milwaukee, $49,900; Bonnett, Michie & Co., Milwaukee, $44,990; John H. Foster & Son, Ashland, Wis., $51,743.

CLINTON, IA.—Bids are asked until July 20 for a system of heating and ventilation, etc., for the Ringwood Park school building. Secy., A. H. Paddock.

DES MOINES, IA.—Plans are about prepared, according to reports, for the new Iowa Art and Memorial Hall, only one wing of which is to be built at present. Estimated cost, $57,000. Archs., Smith & Gutterson.

MINNEAPOLIS, MINN.—John Wunder, 11 Lumber Exchange, has been awarded the contract for erecting a 2-story brick sub-station, 42 × 52 ft., at 26th St. and 1st Ave., for the Northwestern Telephone Co., to cost $[illegible]. It is reported that the architect, W. B. Dunnell, Bank of Commerce Bldg., has plans for a duplicate of this building to be erected in St. Paul.

ST. PAUL, MINN.—Bids are being received, according to reports, for the erection of a new church building, 85 × 175 ft., for St. Bonifacius German Catholic Church, to cost about $34,000. Archs., Herman Kretz & Co., New York Life Bldg., St. Paul.

COLUMBUS, NEB.—We are informed that $25,000 of school bonds have been sold, and that plans are now being made for the erection of a $18,500 school building. Bids will probably be received in the first part of July.

CHEYENNE, WYO.—The following bids were received June 30 by the supervising architect, Washington, D. C., for excavation, foundation, stone and brick work of basement and area walls, basement columns, first floor steel beams, girders, etc., for the U. S. Building at Cheyenne.

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| Moses O'Keefe & R. W. Bradley, Cheyenne | $35,800 | 4 mos. |
| G. W. Atkinson, Colorado Springs, Colo. | 38,341 | " |
| Bentley Construction Co., Milwaukee, Wis. | 42,421 | " |
| Geddis & Seerie Stone Co., Denver, Colo. | 34,950 | " |
| Jas. R. Gremis, Cheyenne | 42,775 | " |
| B. J. Jobst, Omaha, Neb. | 35,950 | " |

KANSAS CITY, MO.—The following bids were received by the supervising architect, Washington, D. C., June 29, for the rear wall, steel and iron work, skylights, brick and terra cotta floor arches and certain changes in the U. S. Building at Kansas City, Mo.: L. L. Leach & Sons, Chicago, Ill., $43,000, time, 8 months; Pioneer Fireproof Construction Co., Chicago, Ill., $45,613, 7 mos.; Empire Fireproofing Co., Chicago, Ill., $42,500, 6 mos.; Dugan & Hayde, Kansas City, Mo., $45,748, 8 mos.; Wm. Harmon, Kansas City, $54,895, 5 mos.

ST. LOUIS, MO.—The Anderson Construction Co., 603 American Central Bldg., formerly Anderson Bros., has received the contract for remodeling the five buildings at 6th and Washington Aves., for D. Crawford & Co.

SEATTLE, WASH.—Nichols & Crothers have been awarded the contract for the construction of the Magnolia Bluff army barracks, at $82,000.

MORO, ORE.—Bids are asked until July 27 for the erection of a new church building for the Methodist Church. R. E. Hoskinson may be addressed.

ST. THOMAS, ONT.—We are informed that bids are asked until October 1 for the equipment of a 12-room school building to be erected in this city. Contracts for the erection of the building were to have been awarded June 30; heating, ventilating and seating bids have not yet been asked for. Estimated cost of building, $25,000; of equipment, $4,000. Archs., B. Long & Son, St. Thomas.

KASLO, B. C.—The plans of Ewart & Carrie are said to have been accepted for the municipal building to be erected here.

## WATER-WORKS.

WINTHROP, MASS.—S. G. Irvin, Chn. Com., writes us that no information can be given as yet in regard to the proposed purchase of the works in this city. The committee has only got as far as to have an act passed authorizing the purchase of the works; population, 6,000.

WORCESTER, MASS.—The committee has recommended an appropriation of $72,000 for new water mains in about 20 streets. There will be required about 17,000 ft. of 8 to 40-in. mains.

FULTON, N. Y.—O. C. Breed, Cy. Engr., writes us that this city voted June 28 to build city works to cost $115,000. Developments await the action of the commission. General plans have already been prepared. Consult. Engr., Wm. R. Hill, Supt. and Engr. Water-Works Dept., Syracuse, N. Y.

MONTOUR FALLS, N. Y.—Dr. Geo. M. Post, Pres. village, writes us that this place voted June 29 to issue $34,000 in bonds to put in works. It is expected to [illegible] for bids soon for constructing the works. Engr., Alex. Potter, 137 Broadway, New York.

ASBURY PARK, N. J.—The Monmouth Water Supply Co. has been organized to construct new works for Neptune township, Asbury Park; capital stock, $100,000.——The question of issuing $40,000 in bonds for purchasing the present water supply in Avon and also for extending it is being considered. Jas. A. Bradley, Asbury Park, may be addressed.

JERSEY CITY, N. J.—The question of putting watermeters in the houses and buildings of this city is being considered by the city officials. It is stated that about 26,000 meters will be required.

PERTH AMBOY, N. J.—The Snow Steam Pump Works, Buffalo, N. Y., have been awarded the contract for furnishing and installing a 4,000,000-gallon pumping engine at Runyon. This award will be contested by the companies which bid lower, according to reports.

BARNESBORO, PA.—An election will be held July 9 to vote on the question of issuing $9,500 in bonds for works, according to reports.

MILLHALL, PA.—Jos. Jeffries, Secy. Millhall Water Co., writes us that no steps have yet been taken toward building the works.

PHILADELPHIA, PA.—An ordinance has been introduced in the common council authorizing an appropriation of $500,000 for a filtration plant.

BALTIMORE, MD.—It is reported that the council is considering the question of building a filtration system at the water-works at a cost of $1,500,000. Ch. Engr., E. G. Kenly.

WASHINGTON, D. C.—The chief of engineers has been directed to prepare plans and estimates for a method of filtering the Potomac water.——The American Pipe & Foundry Co., Chattanooga, Tenn., was awarded the contract June 27 for furnishing water pipe during the year ending June 30, 1899.

BESSEMER, ALA.—The Bessemer Land & Improvement Co. is reported as making surveys for increasing the water supply of the town.

CROWLEY, LA.—J. E. Barry, Mayor, writes us that the Consolidated Engineering Co., Ltd., New Orleans, La., has been awarded the contract for building the works and light plant for this place.

CINCINNATI, O.—Bids are asked until July 29 for constructing seven sluice gates for the intake for the Eastern pumping station, as described in our advertising columns. Chas. G. Roth, Clk. Bd. Water Comrs.

ELYRIA, O.—W. H. Park writes us that this place voted June 27 to purchase the works of the Elyria Gas & Water Co. for $45,000. The city was to take possession of the property July 1. Supt., G. E. Crisp.

GLOUSTER, O.—This place voted June 23 to build works, according to reports.

NORWALK, O.—The following contracts are reported to have been let June 29 for furnishing and constructing the stand-pipe, pumping station, etc., as advertised in Engineering News: B. P. Foster, Norwalk, stand-pipe, $2,300; Standard Boiler & Bridge Co., Alliance, metal work for stand-pipe, $6,588; the Snyder-Hughes Co., Cleveland, pumping engine, $7,830; S. Tolliat, Alliance, O., pumping station, building and chimney, $6,471; Erie City Iron Works, Erie, Pa., boiler, $1,085.

DELPHI, IND.—Bids are asked until July 19 for furnishing the materials and for constructing a 250,000-gallon masonry lined reservoir for the water-works. Wm. C. Smith, Cy. Attorney.

WHITING, IND.—Bids are asked until July 18 for furnishing and laying 6 to 10-in. cast-iron water pipe, hydrants, valves, etc. J. G. Erdlitz, Town Clk.

CASS CITY, MICH.—Bids are asked until July 20 for the purchase of $18,000 of 4% water and light bonds. H. W. Seed, Clk.

YALE, MICH.—Bids are asked until July 19 for furnishing and constructing works, as described in our advertising columns. E. F. Fead, Clk.

DUQUOIN, ILL.—Bids were asked until July 5 for furnishing the material and for building a dam, gate house, pumping station, pumps, etc., for completing the works, the contracts for a part of which were let last year. Job Cook, Cy. Clk.; D. W. Dunn, Mayor.

BLAIR, WIS.—E. L. Immell, Village Pres., writes us that the proposed works will have a reservoir on a hill 200 ft. high, three-quarters of a mile of 8-in. mains, etc.; estimated cost, $4,000; population, 500. E. O. Gelfellan is on the committee.

MENASHA, WIS.—Henry M. Northrup, Menasha, is reported to have applied for a franchise, the supply to be secured from wells. Population, 8,000. W. W. Reed, Cy. Engr.

ALDEN, IA.—M. Pritchard, Mayor, writes us that the city is ready to receive bids for furnishing and constructing works to cost $5,000. The works will have a 50-ft. steel tower, a 20 × 20-ft. wooden tank, 4 and 6-in. pipe, etc. The pump will not be determined upon until the well is completed. Engrs., Jackson & Moss, Des Moines, Ia.

MINDEN, IA.—Jno. W. Crow, Mayor, writes us that the following bids were received June 30 for furnishing the material, etc., and for building works:

| | Per specifications. | Amended bids. |
|---|---|---|
| Casselbery & Schriner, Des Moines | $5,800 | .... |
| U. S. Supply Co., Omaha, Neb. | 4,668 | $4,293 |
| Connelly & Shaw, Omaha, Neb. | 4,750 | 4,002 |

The contract was awarded to Connelly & Shaw at $4,002. The council after considering the bids asked the bidders to put in a bid for steel tower and Roots spiral pipe, which resulted as follows: Connelly & Shaw, deduct $623 from original bid on tower and $125 on Roots pipe; U. S. Supply Co., deduct $150 and $225, respectively.

SPARTA, MINN.—Bids are asked until July 22 for furnishing and constructing works to cost $6,000; bond, $4,000. Engrs, Patton & Frank, Duluth, Minn.; Recdr., Clyde Bender.

BATESVILLE, ARK.—Bids are asked until July 14 for furnishing the material and for constructing the proposed works and light plant; estimated cost, $25,000. Engr., Owen Ford, 710 Security Bldg., St. Louis, Mo.; Chn. Com., C. R. Handford.

SAN JOSE, CAL.—Bids are asked by the supervisors until July 18 for furnishing and constructing a steel water tower and tank, etc., for the infirmary.

TRENTON, ONT.—Bids were asked until June 30 for furnishing the machinery and for constructing works. J. D. Evans, Engr. Trenton Water Co.; A. W. Hawley, Pres.

## IRRIGATION.

NEW COMPANIES.—Sun River Operative Ditch Co., Helena, Mont.; $10,000; to construct a ditch in Cascade county; G. M. Bourquin, A. S. Douglas, Benj. Borgstede.

Pleasant Valley Canal Co., Helena, Mont.; $5,500; to construct an irrigation ditch or canal, taking the water from Rock Creek; Jeff Dinsdale, William Tennet, E. E. Esselty, L. D. Miller, D. W. Long, Martin Johnson, John McCune, W. P. Meyer, J. C. Simpson, William McIntyre.

Beaumont Irrigating Co., Beaumont, Tex.; $75,000; W. S. Davidson, J. B. Goodhue, J. E. Broussard, A. L. Goodhue and I. K. Bordages.

## SEWERAGE.

BRENTWOOD, N. H.—The sewage disposal plant and filter beds at the Rockingham county farm, Brentwood, N. H., are to be enlarged and improved in accordance with plans submitted by Dudley & Doherty, 936 Elm St., Manchester, N. H.

BOSTON, MASS.—Bids are asked until Sept. 3 for furnishing and constructing a sewage pumping station, as described in our advertising columns. Wm. M. Brown, Jr., Ch. Engr. and Supt. Metropolitan Sewerage Comrs., 1 Mount Vernon St.

HOLYOKE, MASS.—Chas. P. Ferry, of the Bd. Pub. Wks., writes us that it is probable that an appropriation for sewering the Highlands will be made soon. A local paper states that the whole system for the Highlands will cost about $75,000.

SPENCER, MASS.—This place has voted to extend the Cherry St. sewer. N. E. Craig, Supt. Sewers.

DERBY, CONN.—E. S. Gordy writes us that the whole question of a system rests in abeyance. It is hoped to accomplish something during the next 12 months.

AMSTERDAM, N. Y.—Bids are asked until July 21 for constructing sewers in four streets. Geo. McClumpha, Secy. Sewerage Comm.

TONAWANDA, N. Y.—The boards of public works of this city and North Tonawanda are reported as again considering the question of improving the systems of these places.

JERSEY CITY, N. J.—The street and sewer board has asked the finance committee for $60,000 to reconstruct certain sewers.

WEST HOBOKEN, N. J.—The officials of this place and Jersey City are considering the question of building a joint sewer in New York Ave.

CAMBRIDGE SPRINGS, PA.—Ross & Robinson have been awarded the contract for constructing sewers in Main St. and Beach Ave.

ESPLEN, PA.—Bids are asked until July 7 for constructing a 24-in. pipe sewer with laterals in Third St. Engr., G. A. Gilfillan, 8 Fidelity Bldg., Pittsburg; Clk., A. W. Gibson, Esplen, P. O. McKee's Rocks, Pa.

PHILADELPHIA, PA.—Council's have appropriated $500,000 for building certain main sewers.

PHILADELPHIA, PA.—Bids will soon be asked by the director of the department of public works for constructing sewers in about 40 streets. Chas. F. Warwick, Mayor.

TAMAQUA, PA.—Samuel Beard, Town Clk., informs us that Ward & Stucker, Harrisburg, have been awarded the contract for building pipe sewers, as advertised in Engineering News. The bids were as follows:

| | |
|---|---|
| Samuel W. Frescoln, Reading, Pa. | $4,949 |
| E. H. Post, Wilkesbarre, Pa. | 6,218 |
| Phil. J. Boyle & Co., Hazleton, Pa. | 6,099 |
| Ward & Stucker, Harrisburg, Pa. | 4,550 |
| P. J. Cleary, Shenandoah, Pa. | 6,800 |
| W. J. Coons, Kingston, Pa. | 5,140 |
| Humphreys & Rowe, Ashland, Pa. | 8,158 |
| J. B. Uric, Tamaqua, Pa. | 6,944 |
| Hadesty & Kitchen | 7,048 |

WARREN, PA.—Bids are asked until July 9 for building 2,900 ft. of pipe sewer in the 5th and 6th Wards. R. G. Mead, Chn. Com.

WASHINGTON, D. C.—Bids are asked by the district commissioners until July 16 for constructing sewers.——Congress has appropriated $25,000 for the purchase of land and for preparing plans for the proposed sewage pumping station, under the approved project for sewage disposal in the District of Columbia.

GOLDSBORO, N. C.—Bids are asked until July 21 for furnishing and constructing about 12 miles of 20 to 6-in. pipe sewers, as stated in our advertising columns. Engr., J. L. Ludlow, Winston, N. C.; Cy. Clk., D. J. Broadhurst.

SPARTANBURG, S. C.—J. M. Elford, Clk. and Treas., writes us that the contract for surveys, plans and specifications for a system has been let to J. L. Ludlow, Winston, N. C. Arrangements have also been made for awarding the contracts.

WAYCROSS, GA.—Press reports state as follows: The proposition of C. G. McCranie to build the system for Waycross for about $36,000 includes seven miles of additional sewers than was designated in Mayor Knight's estimate. It is presumed that Mr. McCranie's offer is bona fide, and in case the $50,000 bonds shall be voted he will stand a good chance of getting the contract. There is some little opposition to the bonds, but the only objection raised so far by the opposition is that $100,000 is preferable to $50,000, and that the time is not opportune.

MEMPHIS, TENN.—A. T. Bell, Cy. Engr., writes us that 17½ miles of sewers have been built this year. Nothing more will be done before the spring of 1899.

LEXINGTON, KY.—Local papers state that arrangements are being made for constructing a larger sewer at the Main St. railway crossing.

DETROIT, MICH.—Bids are asked until July 8 for furnishing such sewer pipe as may be required during the year ending June 30, 1899. D. W. H. Moreland, Pres. Bd. Pub. Wks.

MARSHALL, MICH.—Riggs & Sherman, 613 The Nasby, Toledo, O., have been engaged to prepare plans and specifications for the proposed system and certain paving.

TRENTON, MICH.—The council will probably soon issue $1,500 in bonds for building 2,500 ft. of 18-in. pipe sewer.

ST. PAUL, MINN.—Anderson & Johnson have been awarded the contract for constructing a sewer in Gauthier St. at $4,923.

HUDSON, WIS.—J. W. Bashford, Mayor, writes us that no sewers will be built this year.

DENVER, COLO.—Plans are reported as about completed for the proposed system of storm sewers for East Denver. L. N. Wood, Pres. Bd. Pub. Wks.

SAN LOUIS OBISPO, CAL.—The city engineer has submitted estimates for extending the system, at a cost of about $35,000.

CHARLOTTETOWN, P. E. I.—Bids are asked until July 8 for furnishing sewer pipe, etc., for the proposed system. Engr., F. C. Coffin, 53 State St., Boston, Mass.; Chn. Com., David Laird.

GUADALAJARA, JALISCO, MEX.—It is reported that the W. S. Dickey Clay Mfg. Co., Kansas City, Mo., has secured the contract to furnish this city with 300 carloads of sewer pipe for the proposed system for this city. The system will cost complete about $500,000.

## GARBAGE DISPOSAL—STREET CLEANING

MANCHESTER, N. H.—It is reported by the local papers that the council will probably soon ask for bids for removing the garbage and refuse of the city. A citizen has applied for a franchise for the work, the city to pay him $18,000 a year.

CRANSTON, R. I.—Bids were asked until July 5 for collecting and removing the garbage from the villages of Auburn, Arlington, Cranston, Edgewood, Knightsville, Meshanticut and Pawtuxet during the ensuing year. Daniel D. Waterman, Council Clk.

ATLANTIC CITY, N. J.—The council has voted to issue $40,000 in bonds for building a crematory; the lot will cost, $6,000 and the plant $32,000. Councilmen Kelly and Lee may be addressed.

JERSEY CITY, N. J.—The street and water board has asked the council to appropriate $75,000 in addition to the usual appropriation for cleaning the streets.

MILWAUKEE, WIS.—Judge Ludwig has dissolved the temporary injunction restraining the city from selling $160,000 in bonds for the proposed garbage disposal plant, according to reports.

ST. LOUIS, MO.—Bids are asked by the board of health until July 8 for collecting and disposing of the garbage and refuse of the city for 10 years. The present contract with Edward Butler expires July 14.

## STREETS AND ROADS.

DEERING, ME.—D. F. Griffin & Bros. submitted the lowest bids June 28 for laying 8,000 sq. yds. of granite paving, at $13,440.

NEW CASTLE, N. H.—The survey of the Ocean Boulevard has been completed and plans and estimates will be submitted at the next meeting of the council. Dudley & Doherty, Engrs., Manchester.

BURLINGTON, VT.—Bids are asked until July 10 for the purchase of $20,000 of 4% street improvement bonds. L. C. Grant, Cy. Treas.

REVERE, MASS.—Miric & Wentworth, Malden, have been awarded a contract at $9,600 for street work.

NEWPORT, R. I.—Bids are asked until July 15 for 6,630 sq. yds. of asphalt paving. William Hamilton, St. Comr.

BRIDGEPORT, CONN.—Main St. will be paved with asphalt at a cost of about $8,000. Thos. P. Taylor, Mayor.

HARTFORD, CONN.—Bids are asked until July 13 for constructing about 2,000 sq. yds. of Trinidad sheet asphalt and furnishing and laying concrete foundation. Chas. H. Northam, Pres.

NEW HAVEN, CONN.—Bids are asked until July 8 for paving Wall St. with concrete, from York St. to State St., and for furnishing crushed stone for the year. C. W. Kelly, Cy. Engr.

WATERTOWN, CONN.—Bids are asked until July 13 for improving a road from Watertown to Waterbury. Geo. A. Harper, First Selectman.

BINGHAMTON, N. Y.—Bids are asked until July 15 for brick paving in Court St., from Exchange to Carroll St. B. W. Mosher, Cy. Clk.

EAST AURORA, N. Y.—Bids are asked until July 11 for paving in Main St. C. H. Addington, Clk.

KINGSTON, N. Y.—J. T. Cummings, Cy Clk., has been ordered to advertise for bids for grading and curbing several streets.

NEW YORK, N. Y.—Bids are asked by the department of highways, 150 Nassau St., until July 14, for furnishing broken stone and screenings and 100,000 gallons of No. 6 paving cement; also for repairing asphalt pavement in certain streets in the Borough of Brooklyn. Jay A. Keating, Comr.

NORWICH, N. Y.—The board of trustees will vote on a resolution July 11 to pave East Main St., West Main St. and Broad St. with brick, to cost about $35,000. John W. Bingham, Clk. Bd.

POUGHKEEPSIE, N. Y.—The board of public works has awarded a contract to Cornelius Daley, at $14,602, for paving in Main St.

ROCHESTER, N. Y.—The following are the lowest bids received by the board of public works June 27 for paving: Warren-Scharf Asphalt Paving Co., asphalt, Columbia Ave., $41,431; asphalt, Tremont Place, $1,457; Chambers & Casey, macadam, Post St., $4,949.

TROY, N. Y.—Bids are asked until July 12 for paving Franklin St. with brick, from Congress St. to Ferry St. E. Ogden Ross, Secy. Contracting Bd.——Contracts were awarded June 28 to M. J. Jackson & Son, at $21,217, and Frank Besch, at $27,389, for brick paving in two streets.

FREEHOLD, N. J.—Bids are asked until July 13 for constructing 7,871 lin. ft. of gravel road, in Millstone township. L. D. Honce, Clk. Bd. Freeholders.

MORRISTOWN, N. J.—The board of freeholders have awarded a contract to Augustus Munson & Co., at $19,167, for grading and macadamizing the Basking Ridge Road.

NEWARK, N. J.—Bids are asked until July 7 for furnishing the materials and paving six streets with asphalt or granite. M. F. McLaughlin, Supt. Bd. St. Comrs.

CARBONDALE, PA.—Bids are asked until July 23 for about 7,460 sq. yds. of paving, as stated in our advertising columns. F. B. Clifford, Cy. Clk.

ERIE, PA.—Proposals will soon be asked for curbing several streets. T. Hanlon, Cy. Clk.

READING, PA.—Bids will soon be asked by the board of public works for brick paving in portions of nine streets, to cost about $100,000.

SUNBURY, PA.—Bids were received July 5 for about 5,350 sq. yds. of brick paving, 2,700 lin. ft. of curb, etc. P. H. Moore, Ch. Burgess.

TARENTUM, PA.—Bids are asked until July 20 for constructing 5,950 sq. yds. of pavement, according to reports. John Duster, Chn. Com.

DURHAM, N. C.—An election will be held on Aug. 1 to vote on the question of issuing $225,000 in bonds for street improvements, an electric light plant and water-works.

ASHLAND, O.—Bids are asked until July 30 for 1¼ miles of brick paving, as stated in our advertising columns. E. B. Westover, Clk.

COLUMBUS, O.—Bids are asked until July 12 for furnishing the material and constructing seven roads. W. H. Halliday, County Audr.

SOUTH BEND, IND.—Bids are asked until July 25 for constructing 26,000 sq. yds. of sheet asphalt pavement in West Washington St., from Michigan St. to South Walnut St. Wm. H. Rosencrans, Cy. Engr.

DETROIT, MICH.—The board of public works has awarded a contract to the Michigan Stone & Supply Co., at $16,993, to macadamize La Salle Ave.

DETROIT, MICH.—Bids are asked until July 11 for furnishing the material and constructing about 32,000 sq. yds. of cedar block paving on concrete. D. W. H. Moreland, Pres. Bd. Pub. Wks.

GRAND RAPIDS, MICH.—The Warren-Scharf Asphalt Paving Co. has been awarded a contract at $21,074 to pave Crescent Ave.

MARSHALL, MICH.—Riggs & Sherman, Engrs., 613 The Nasby, Toledo, O., are preparing plans and specifications for paving.

CHARLESTON, ILL.—Bids will be asked about July 27 for paving, according to reports. T. V. Miles, Cy. Clk.

CHAMPAIGN, ILL.—Bids are asked until July 14 for brick paving, as stated in our advertising columns. J. R. Scott, Pres. Bd. Local Improvements; R. P. Brower, Cy. Engr.

DECATUR, ILL.—It is proposed to pave portions of Jasper and Sangamon Sts. with asphalt; estimated cost, $19,899.

WAUKEGAN, ILL.—The board of local improvements has decided to pave and construct sidewalks in Water St., to cost about $6,900.

PORTAGE, WIS.—Bids are asked until July 8 for brick paving, according to reports. J. E. Jones, Mayor.

CEDAR FALLS, IA.—F. O. Jackson, Cy. Clk., informs us that bids will be asked after July 11 for brick paving in six blocks. D. M. Rosser, Engr., Cedar Falls.

DES MOINES, IA.—The council will vote July 11 on a resolution to pave two alleys with brick. John MacVicar, Mayor.

IOWA CITY, IA.—Bids are asked until July 15 for furnishing the material and constructing 3,000 sq. yds. of brick pavement, 1,727 lin. ft. of curb and 1,292 cu. yds. of grading. W. J. Bowen, Cy. Clk.; Arthur J. Cox, Cy. Engr.

SIOUX CITY, IA.—Bids are asked until July 12 for the following pavement: 6,268 sq. yds. of sheet asphalt, 24,572 sq. yds. of brick on concrete base and 12,313 sq. yds. of brick on sand foundation. J. M. Lewis, Acting Cy. Engr.

ANACONDA, MONT.—Bids are asked until Aug. 2 for laying out the Lincoln & Helmville Road for a distance of 12 miles. H. B. Davis, County Surveyor; M. Martin, Clk.

HOUSTON, TEX.—An ordinance authorizing the city to borrow $100,000 for paving and sewer purposes has been referred to the ordinance committee.

SEATTLE, WASH.—Reports state that the question of constructing a road and bicycle path from Seattle to Tacoma is being considered. F. M. Little, Supt. Sts., may be addressed.

SPOKANE, WASH.—Bids are asked until July 14 for paving in Riverside Ave. with sheet asphalt on concrete foundation; also for maintaining the same for 10 yrs. B. H. Fowle, Secy. Bd. Pub. Wks.

ST. JOHN, N. B.—The board of public works has received estimates for the improvement of about 20 streets. Director Smith of Superintendent Martin may be addressed.

## MANUFACTURING PLANTS.

BRIDGEPORT, CONN.—The factory of the Coach Lace Co., on John St., has been damaged by fire. The building is a 4-story brick structure, 150 × 50 ft., and the loss is estimated at $75,000.

BUFFALO, N. Y.—We are informed that Henry S. Schaefer's Sons, Oak and Virginia Sts., Buffalo, have received the contract for the erection of a new 8-story fireproof building, 182 × 150 ft., for the Larkin Soap Co.; estimated cost, $200,000. Arch., Robt. J. Reidpath, Real Estate Exchange, Buffalo.

BRONXVILLE, N. Y.—The factory of the Ward-Leonard Electric Co., in this village, was burned, July 2, causing a reported loss of $45,000.

ORANGE, N. J.—The hat factory of Austin Drew & Co., on Nassau St., was destroyed by fire July 4, causing a loss of about $80,000.

CONNELLSVILLE, PA.—It is reported that the Slaymaker-Barry Co. has decided to rebuild at once the lock works at South Connellsville, at a cost of about $40,000. Pres., S. R. Slaymaker.

YORK, PA.—The York Mfg. Co. will erect a 2-story machine shop at this place, according to reports. Electrical equipment will be required.

LOUISVILLE, KY.—Press reports state that the iron foundry of Snead & Co., which was destroyed by fire on June 23, will be rebuilt at once. Estimated loss, $150,000; insurance, $136,800. Vice-Pres., Udolpho Snead.

SIOUX CITY, IA.—Bids are still being received, according to reports, on the equipment for the new brewing plant which will be built in this city for the Sioux City Brewing Co., at an estimated cost of $250,000 for the buildings and $100,000 for the equipment. We are informed that there will be installed therein several Corliss engines, tubular boilers, an electric light plant capable of supplying 150 lights, etc. Arch., Wilhelm Greisser Engineering Co., 909 Schiller Bldg., Chicago, Ill.

KANSAS CITY, MO.—M. G. Orendorff, Secy. and Treas., Parlin & Orendorff Co., of Canton, Ill., informs us that the company will erect a 6-story building, 192 × 127 ft., in this city, for use as an agricultural implement and jobbing warehouse. Plans have not yet been decided upon, and no contracts have been awarded. Plans will probably be received on architect's specifications some time this month. Electric lights will be used; no engines other than electric dynamos for operating elevators will be required. Estimated cost of full equipment, $75,000.

MOUNT GROVE, MO.—The Star Roller Mills, of Mount Grove, informs us that the capacity of the flour mills will be increased to 200 barrels. No engines or boilers are required, but a dynamo to supply 100 electric lights will be bought. No contracts have been let.

FAIRHAVEN, WASH.—Reports state that H. L. & J. W. Roan will erect an ice and cold storage plant at this place at a cost of about $25,000.

## GAS PLANTS.

FRANKLIN, N. Y.—A. J. Richardson will lay gas mains to supply the city with natural gas.

CAMDEN, N. J.—Bids are asked until July 20 for supplying this city with gas light during the ensuing year. Chas C. Southard, Chn. Lighting Com.

DELAWARE, O.—J. C. Childs, owner of the natural gas fields at Mount Vernon, is reported to have been granted a franchise to supply this city with gas.

NEW COMPANIES.—Henry G. Thompson Co., New Haven, Conn.; $50,000; to manufacture gas meters and other machinery; Henry G. Thompson, Samuel G. Bower, H. Grant Thompson, New Haven.

Uniontown Cotton Oil Co., Uniontown, Ala.; $40,000; J. H. White, W. H. Taylor, G. B. Johnstone, W. J. White.

American Illuminating Gas & Fuel Co., Boston, Mass.; $1,000,000, with $125 paid in; E. D. Luxton, New York; H. W. Bates, J. D. Huhn, Boston.

## MISCELLANEOUS CONTRACTS.

FIRE ENGINES.—Lincoln, Neb.—The council has decided to purchase a fire engine.

FIRE APPARATUS.—Montgomery, Ala.—The mayor has been authorized to purchase new fire apparatus.

TELEPHONE LINE.—Hanover, Pa.—The Hanover Telephone Co. has decided to extend its line to Glenville.

TELEPHONE SYSTEM.—Windsor, Mich.—The council has granted a 20-year franchise to the People's Telephone Co.

FIRE ALARM SYSTEM.—Peoria, Ill.—The fire and water committee is investigating the cost of installing a fire alarm system.

FIRE ENGINE.—Cleveland, O.—Bids are asked until July 14 for furnishing one first size steam fire engine. G. L. Hechler, Dir. Fire Service.

BONDS.—Holly Springs, Miss.—Bids are asked until Aug. 2 for the purchase of $43,000 of 6% bonds. John Calhoon, Mayor; G. C. Cannon, Clk.

RETORTS.—Hamilton, O.—Bids are asked until July 15 for constructing three benches of retorts with new iron work for the same. M. O. Burns, Cy. Clk.

RECREATION PIER.—Brooklyn, N. Y.—The dock department will soon call for bids for completing the Brooklyn recreation pier; estimated cost, $8,000.

DREDGING.—Waukegan, Ill.—Bids are asked until July 9 for dredging the channel of the harbor of this city, making the same 18½ ft. below datum. H. Thacker, Cy. Clk.

DIKE.—York River, Va.—Bids are asked until Aug 6 for constructing a dike at York River, as stated in our advertising columns. Lt.-Col. Chas. J. Allen, U. S. Engr., Washington, D. C.

WHARF AND FREIGHT SHED.—Halifax, N. S.—Bids are asked by the Intercolonial Railway Co. until July 15 for constructing a wharf and freight shed at this place, according to reports. D. Pottinger, Gen. Mgr., Moncton, N. B.

DREDGING, ETC.—Virginia.—Bids are asked until Aug. 6 for dredging and rock excavation in Rappahannock River and Urbanna Creek, Va., as stated in our advertising columns. Lt.-Col. Chas. J. Allen, U. S. Engr., Washington, D. C.

CHANGING CHANNEL.—Dayton, O.—The contract for changing the channel of the Miami River from the north corporation line to the Dayton & Michigan R. R., was awarded, June 30, to John Williams & Co., at $38,079, according to reports.

PIER AND DREDGING.—Cleveland, O.—L. P. & J. Smith Co., Cleveland, has submitted the lowest bid, at $451,264, for constructing and removing a part of the west pier, dredging and completing the east breakwater. Col. J. A. Smith, U. S. Engr.

UNDERGROUND CROSSING.—Kingston, N. Y.—Bids are asked until July 16 for furnishing the material and for constructing an underground crossing for the Colonial City Traction Co., as stated in our advertising columns. (Postponement from July 9.) C. Gordon Reel, Supt. and Engr.

MONITORS AND TORPEDO-BOATS.—Washington, D. C.—Bids are asked by the navy department until Aug. 9 for furnishing and constructing torpedo-boats and destroyers and until Oct. 1 for four monitors about 225 ft. long and 50 ft. wide, to cost about $1,200,000 each, exclusive of armament.

DRAIN.—Coldwater, Mich.—Bids are asked until July 15 for the construction of Kinderhook No. 1 drain, including a catchbasin. Work will be let in five contracts, as follows: Furnishing tile drain, constructing tile drain, constructing open drain, cleaning old drain and constructing catch basin. Danl. E. Weage, County Drain Comr., Coldwater.

DREDGING, QUAY WALL, ETC.—Brooklyn, N. Y.—Bids are asked by the Bureau of Yards and Docks, Navy Department, Washington, D. C., until July 16, for dredging Whitney Basin and Wallabout Bay, for constructing quay wall between Dry Dock No. 1 and Main St., and for constructing quay wall, coal dock, all at the U. S. Navy Yard, Brooklyn, New York (three bids). Mordecai T. Endicott, Chf. of Bureau, Washington, D. C.

DREDGING.—Boston, Mass.—The following bids were received June 28 by the harbor and land commissioners for dredging in South Bay, as advertised in Engineering News, and either depositing the material within the harbor lines or at sea:

| | First alternative. | Second alternative. |
|---|---|---|
| Pan-American Dredging Co., Boston | $29,987 | $33,500 |
| Eastern Dredging Co., Boston | 43,650 | 43,894 |
| International Contracting Co | 43,500 | 38,000 |
| Albert Hussey, New York | 36,118 | 36,148 |

## CONTRACT PRICES.

SEWERAGE SYSTEM.—Mercer, Pa.—G. B. Zahniser, Engr., Clendenin Block, New Castle, Pa., informs us that the following bids were received June 27, 1898, for a sewerage system for the east side, as advertised in Engineering News; minimum grade, 50%; maximum grade, 22%; Cy. Clk., J. M. Campbell:

| Bidder. | Pipe, a ft.—Sewer, laid.—10-in., 10,700 ft. | 8-in., 1,300 ft. | Iron. 10-in., 505 ft. | 36 ft. | Flushtanks, 3, each. | Manholes, 3, each. | Lampholes, 10 each. |
|---|---|---|---|---|---|---|---|
| J. M. Dieterle | $0.26 | $0.27 | $0.32 | $1.30 | $50.00 | $17.00 | $3.00 |
| C. R. De Gradt | .30 | .34 | .36 | 2.50 | 55.00 | 25.00 | 8.00 |
| J. W. Mitchell | .23 | .28 | .30 | 1.05 | 36.00 | 22.00 | 4.00 |
| W. H. Mitchell | .21 | .22 | .25 | .88 | 50.00 | 18 00 | 3.50 |
| C.T.S. McQuiston | .30 | .335 | .43 | 1.75 | 50.00 | 25.00 | 4.00 |
| T. McGuiggan | .24 | .31 | .35 | 2.667 | 45.00 | 30.00 | 4.75 |
| J. W. Kelley | .34 | .37 | .43 | 1.10 | 60.00 | 28.00 | 4.20 |

F. F. Sutliff & Son, lump sum for system complete...$3,310

BRICK PAVING.—Wilmington, Del.—Harvey J. Wiley, Secy. St. Depart., informs us that a contract was awarded to Simmons & Bros., June 21, for constructing 30,000 sq. yds. of brick pavement at 5½ cts. a sq. yd. Francis McCloskey, St. Comr.

PIER WORK.—**Cleveland, O.**—We are informed that the following bids were received June 23, 1898, for constructing a part of West Pier, removing part of old West Pier, dredging and completing East Breakwater at Cleveland Harbor, as advertised in Engineering News; Col. Jared A. Smith, U. S. Engr., at Cleveland:

Bids Received at Cleveland, O., June 23, 1898, for Pier Work.

| Quantities. | D. & G. Griese, Cleveland, O. | I. V. Hoag, Jr, Pittsburg, Pa. | Jno. Gill & Sons, Cleveland, O. | Michael Rabbitt, Toledo, O. | Carkin, Stickney & Cram, Detroit, Mich. | James B. Donnelly, Buffalo, N.Y. | J. A. Smith Co., Cleveland, O. | A. F. Chapman & Co., Buffalo, N.Y. | Joseph J. Churchyard, Buffalo, N.Y. |
|---|---|---|---|---|---|---|---|---|---|
| Hemlock timber 7,059,959 ft. B.M. | $19.00 | $23.00 | $17.75 | $23.25 | $15.00 | $15.00 | $15.00 | $17.00 | $17.50 |
| White p. timber 2,780,279 " " | 29.50 | 30.00 | 31.75 | 33.25 | 21.50 | 24.00 | 25.00 | 27.00 | 27.50 |
| Sheath g, old w'k*204,462 " " | 39.00 | 125.00 | 87.50 | 65.00 | 60.00 | 75.00 | 50.00 | 75.00 | 60.00 |
| " new wk*455,720 " " | 37.00 | 100.00 | 38.00 | 65.00 | 60.00 | 15.00 | 40.00 | 75.00 | 54.00 |
| Other than sh't'g*111,264 " " | 31.00 | 150.00 | 35.00 | 38.00 | 35.00 | 36.80 | 30.00 | 34.00 | 34.50 |
| White oak piles... 9,720 lin. ft.. | .40 | .45 | .45 | .45 | .26 | .42 | .25 | .35 | .25 |
| Tie rods .....617,570 lbs..... | .035 | .03 | .025 | .0325 | .025 | .02 | .02 | .03 | .03 |
| Bolts and washers871,055 " ..... | .035 | .03 | .025 | .035 | .0225 | .035 | .02 | .03 | .03 |
| Lag screws .....313,150 " ..... | .035 | .03 | .05 | .135 | .035 | .026 | .025 | .02875 | .04 |
| Drift bolts .....758,386 " ..... | .03 | .03 | .02 | .035 | .02 | .02 | .015 | .0275 | .02 |
| Spikes .....17,200 " ..... | .04 | .03 | .03 | .045 | .035 | .03 | .02 | .035 | .03 |
| Straps .....193,435 " ..... | .04 | .07 | .035 | .035 | .02 | .03 | .03 | .04 | .03 |
| Bent plates .....9,280 " ..... | .03 | .07 | .03 | .10 | .02 | .025 | .03 | .045 | .05 |
| Wire nails .....1,400 " ..... | .03 | .03 | .03 | .06 | .04 | .02 | .02 | .03 | .03 |
| Mooring rings ... 180 " ..... | .08 | .07 | .20 | .135 | .06 | .10 | .03 | .06 | .10 |
| Stone, filling cribs and pier fndtn.131,500 tons.... | 1.10 | 1.50 | 1.06 | 1.12 | 1.15 | .81 | .80 | 1.15 | 1.90 |
| Leveling fndtn†. 3,500 " ... | 2.50 | 1.80 | 1.25 | 1.50 | 1.15 | .81 | .80 | 1.20 | 1.00 |
| Riprap protectnt† 25,000 " ... | 1.75 | 2.25 | 1.06 | 1.60 | 1.15 | 1.05 | .80 | 1.45 | 1.20 |
| Sand filling. ..... 3,600 cu. yds. | .60 | .75 | .50 | .67 | .15 | .70 | .20 | .20 | .40 |
| Conc. or stne blks 43,368 cu. ft... | .23 | .70 | .375 | .47 | .40 | .26 | .40 | .42 | .40 |
| Concrete in place. 4,565 " " | 3.85 | 8.00 | 5.35 | 7.29 | 6.40 | 5.72 | 5.00 | 7.00 | 5.25 |
| Rmvg West Pier.. 1,540 lin. ft.. | 16.00 | 27.00 | 5.00 | 4.50 | 5.00 | 5.00 | 1.00 | 8.00 | 3.00 |
| Dredging .....140,000 cu. yds. | .16 | .21 | .13 | .12 | .12 | .12 | .08 | .125 | .14 |
| Moving store-house ..... | 350.00 | 100.00 | 250.00 | 150.00 | 500.00 | 150.00 | 50.00 | 250.00 | 200.00 |
| Total .....| $616,240 | $818,877 | $571,648 | $708,542 | $537,230 | $478,350 | $450,274 | $614,101 | $541,371 |

*White oak. †East breakwater.

SEWERS.—North Tarrytown, N. Y.—W. E. Crane, Engr., informs us that the following bids were received June 16, 1898, for constructing sewers in Sections 2 and 3, as advertised in Engineering News; bids were called for four items—(G) 90 ft. cast-iron pipe under N. Y. C. & H. R. R. R. tracks, and (J) 90 ft. wrought-iron, which is selected; also items (H) and (U) cast-iron outlet and wooden stave outlet pipe into Hudson River; iron pipe is selected to low water line and wooden stave the remaining distance:

CEMENT SIDEWALKS.—Hastings, Minn.—E. E. Tuttle, Chn. Com., writes us that the Portland Stone Co., St. Paul, has been awarded the contract for cement tile sidewalks, at 72 cts. a sq. yd.

GRANITE PAVING, ETC.—Richmond, Va.—W. E. Cutshaw, Cy. Engr., writes us that the council committee awarded the following contracts, June 28, for granite spall paving, granite curbing, etc. Paving, Chas. Ganer and J. A. Gude, 65 cts. a sq. Byd.; curbing, Albin Nethe

BRICK PAVING.—Nanticoke, Pa.—Rebesser & Edmunds have been awarded the following contract for brick paving in Main St.: Park wire cut brick, $1.18 a sq. yd.; straight curbing, a ft., 63 cts.; resetting old curbing, a ft., 15 cts.; granite curbing, a ft., 90 cts. Dr. W. T. Mahon, Pres. Council.

ASPHALT PAVING.—Newark, N. J.—The Newark Asphalt Paving & Construction Co. has been awarded the contract for 20,000 sq. yds. of asphalt paving, at $1.41.

CEMENT SIDEWALK.—Milwaukee, Wis.—D. W. Cutter has been awarded the contract for 5,350 sq. ft. of cement sidewalk, at 10⅞ cts. a ft., and for 550 ft. of combination cement curb and gutter, at 36 cts. a ft.

DREDGING.—Philadelphia, Pa.—It is stated that the International Contracting Co., Syracuse, N. Y., has been awarded the contract for removing a ledge and for dredging in the Schuylkill River between Yankee Point and 58th St., at $5 and 33⅜ cts. a cu. yd., respectively. In both cases the material is to be placed above high water mark within the city limits; and for ledge rock deposited where directed by the department, $5.50 a yd; total, $33,000.

ASPHALT PAVING.—Newark, N. J.—The board of public works awarded to the Newark Paving & Construction Co., the contracts for asphalt paving in two streets, at $1.41 a sq. yd., and in two other streets, at $1.45 a yd.; last year similar work was contracted at $2.35 a yd.

MAIN SEWER.—Allegheny, Pa.—A. V. Purnell has been awarded the following contract for constructing a main sewer in East St.: 1,030 ft. of 24-in. pipe sewer, $2.05 a ft.; 1,050 ft. of 20-in. pipe sewer, $1.55 a ft.; 1,120 ft. of 18-in. pipe sewer, $1.05 a ft.; 5,550 ft. of 9-in. connections, 30 cts. a ft.; 14 No. 1 inlets, $25 each; 16 manhole shafts, $18 each. Total, $7,218. Chas. Geyer, Mayor; Robt. Dilworth, Cy. Clk.

ASPHALT PAVING.—Allegheny, Pa.—The following contract for asphalt paving in Page St. was let to the Sicilian Asphalt Paving Co. June 20, 1898: 1,000 cu.yds. excavation, 50 cts. a yd.; 1,700 sq. yds. sheet asphalt paving, $1.80 a yd.; 1,100 sq. yds. brick sidewalk, 55 cts. a yd.; 1,000 lin. ft. curbing, 45 cts. a ft.; 50 lin. ft. crossing, reset, 15 cts. a ft.; 50 cu. yds. masonry, $4.75 a yd. Total, $4,860.

ARTESIAN WELL.—Casselton, N. Dak.—E. G. Guthrie, Audr., writes us that the following bids were received June 6 for sinking an artesian well: F. M. Wheeler, Casselton, $1.00 a ft. for 550 ft. of galvanized pipe; C. May, 95 cts. for 350 ft.

BLOCK PAVING.—Allegheny, Pa.—The following contract has been let by the council to the Kreps Coal & Sand Co. for Ligonier block paving in Overlook St.: 1,500 cu. yds. excavation, 37 cts. a cu. yd.; 1,450 sq. yds. Ligonier

BIDS RECEIVED AT NORTH TARRYTOWN, N. Y., JUNE 16, 1898, FOR CONSTRUCTING SEWERS IN SECTIONS 2 AND 3.

| Quantities. | Job Small, Sing Sing, N. Y. | C. H. Connel, New York. | S. W. Frescoln, Reading, Pa. | Alex. S. Traub, New York. | D. F. Minihan & Son, Orange, N. J. | Joseph Murphy, Yonkers, N. Y. | John Callery, Weehawken, N. J. | C. M. Haines & Co., Rhinebeck, N. Y. | Ward & Stucker, Harrisburg, Pa. | James J. Shaw, White Plains, N. Y. | Bellew & Merrit Co., Tuckahoe, N. Y. | J. W. McConnell, Brooklyn, N. Y. | O. H. Eldridge, Sing Sing, N. Y. | Baker, Banker & Co., Gloversville, N. Y. | Clapp & Shipman, New York. | Van Vranken & Duel, Tarrytown, N. Y. | Edward H. Post, Wilkes Barre, Pa. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Excavation { Earth ..14,638 cu. yds. | $0.40 | $0.45 | $0.30 | $0.40 | $0.50 | $0.40 | $0.49 | $0.27 | $0.33 | $0.43 | $0.59 | $0.26½ | $0.35 | $0.40 | $0.55 | $0.40 | $0.54 |
| { Rock ... 3,366 " " | 1.20 | 2.50 | 1.30 | 2.90 | 2.85 | .40 | 1.50 | 2.45 | 2.30 | 3.00 | 2.19 | 1.70 | 2.45 | 2.10 | 2.00 | 2.50 | 2.00 |
| Masonry { Concrete . 271 " " | 2.50 | 7.00 | 4.00 | 4.00 | 5.60 | 4.00 | 4.00 | 4.50 | 4.50 | 4.00 | 5.00 | 4.00 | 7.00 | 5.00 | 3.50 | 4.50 | 5.00 |
| { Brick .... 197 " " | 6.50 | 8.00 | 8.00 | 7.00 | 7.70 | 7.00 | 7.50 | 6.25 | 7.00 | 5.25 | 11.00 | 7.00 | 8.50 | 10.00 | 8.50 | 8.00 | 9.00 |
| { Rubble .. 26 " " | 3.00 | 5.00 | 4.00 | 3.00 | 5.40 | 5.00 | 10.00 | 4.00 | 4.50 | 5.00 | 4.50 | 4.00 | 5.00 | 5.00 | 4.00 | 4.50 | 4.00 |
| Manholes and covers 58 each... | 24.00 | 14.00 | 10.00 | 10.00 | 10.00 | 10.00 | 7.00 | 7.95 | 7.50 | 12.50 | 8.25 | 7.50 | 10.50 | 7.50 | 8.00 | 10.00 | 16.00 |
| (G)20-in., c.i. 20 lin. ft.. | 4.00 | 6.00 | 3 65 | 3.00 | 16.00 | 15.00 | 2.70 | 7.00 | 3.20 | 7.00 | 4.80 | 3.00 | 5.00 | 7.00 | 5.00 | 3.50 | 7.00 |
| (H)18-in.,c. i. 200 " " | 3.72 | 3.50 | 8.50 | 4.00 | 15.00 | 3.50 | 2.35 | 3.25 | 2.80 | 3.00 | 4.30 | 5.00 | 8.00 | 6.50 | 3.00 | 5.75 | 6.50 |
| All other c.i. 500 lbs..... | .03 | .02 | .03 | .02 | .04 | .03 | .05 | .01¾ | .02½ | .05 | .01 | .02½ | .01½ | .05 | .04 | .10 | .025 |
| (J)20-in,wt. i. 90 lin. ft.. | 5.00 | 8.00 | 5.00 | 3.00 | 14.00 | 15.00 | 15.00 | 7.85 | 6.20 | 6.50 | 6.70 | 10.00 | 10.00 | 8.00 | 6.00 | 7.50 | 6.50 |
| All othr wt.i. 1,910 lbs..... | .10 | .05 | .05 | .02 | .04 | .05 | .05 | .02½ | .02½ | .10 | .04 | .04 | .05 | .10 | .04 | .10 | .07 |
| Sewer pipe 20-in., vit'f'd 1,828 lin. ft.. | .78 | .65 | .55 | .60 | .80 | .87 | .73 | .47 | .45 | .58½ | .92 | .58 | .67 | .65 | .66 | .60 | 1.00 |
| 18-in., " 1,300 " " | .60 | .55 | .43 | .45 | .45 | .70 | .62 | .38 | .34 | .46 | .63 | .49 | .54 | .55 | .54 | .46 | 1.10 |
| 15-in., " 240 " " | .48 | .40 | .33 | .35 | .40 | .65 | .50 | .30 | .27 | .36 | .48 | .40 | .42 | .45 | .40 | .40 | .72 |
| 12-in., " 3,780 " " | .41 | .26 | .23½ | .22 | .25 | .55 | .35 | .22 | .17 | .26½ | .34 | .28½ | .31 | .30 | .29 | .27 | .43 |
| 10-in., " 5,500 " " | .33 | .22 | .16½ | .18 | .20 | .50 | .25 | .18 | .13 | .21½ | .25 | .20 | .26 | .22 | .25 | .19 | .30 |
| 8-in., " 10,922 " " | .24 | .15 | .11½ | .15 | .18 | .40 | .15 | .14¾ | .11 | .15¼ | .23 | .17 | .18 | .15 | .12 | .14 | .25 |
| 6-in. undrdns 760 " " | .20 | .15 | .16 | .20 | .40 | .12 | .12 | .11 | .10 | .20 | .28 | .12 | .12 | .25 | .07 | .15 | .30 |
| Piling driven ..... 4,100 " " | .26 | .25 | .20 | .25 | .55 | .35 | 1.00 | .22½ | .30 | .70 | .30 | .26 | .35 | .25 | .20 | .20 | .25 |
| Piling cut off ..... 1..... | .26 | .25 | .06 | .22 | .40 | .35 | .25 | .12 | .20 | .10 | .30 | .10 | .10 | .12½ | .15 | .40 | .25 |
| Grillage { Pine .....29,000 ft. B.M. | .22 | 30.00 | 32.00 | 35.00 | 32.00 | 25.00 | 30.00 | 30.00 | 27.00 | .... | 26.00 | 28.00 | 26.50 | 28.00 | 30.00 | 35.00 | 45.00 |
| { Spruce ... 1,000 " " | .20 | 35.00 | 30.00 | 33.00 | 25.00 | 20.00 | 30.00 | 23.00 | 21.00 | 28.50 | 25.00 | 19.00 | 23.50 | 25.00 | 25.00 | 30.00 | 70.00 |
| { Hemlock .. 1,000 " " | .18 | 30.00 | 28.00 | 30.00 | 22.00 | 18.00 | 30.00 | 18.00 | 16.00 | 25.50 | 23.00 | 14.00 | 20.00 | 20.00 | 22.00 | 30.00 | 30.00 |
| (U)18-in. w'den pipe. 200 lin. ft.. | 5.40 | 2.50 | 7.50 | 7.00 | 6.50 | 3.50 | 1.50 | 2.75 | 3.75 | 3.00 | 3.50 | 1.50 | 6.00 | 6.00 | 3.50 | 4.50 | 6.70 |
| Sheeting and shoring 2,200 ft. B.M. | 20.00 | 15.00 | 20.00 | 10.00 | 20.00 | 20.00 | 20.00 | 19.00 | 15.00 | 25.00 | 15.00 | 15.00 | 16.00 | 20.00 | 20.00 | 20.00 | 30.00 |
| Earth embankment.. 150 cu. yds. | .50 | 1.50 | 1.25 | .40 | 1.10 | .90 | 1.00 | .90 | .50 | .95 | .80 | .50 | 1.00 | 1.00 | .40 | .75 | 1.00 |
| Lamphole casting .. 18 each.... | 6.00 | 5.00 | 3.00 | 5.00 | 5.00 | 4.00 | 25.00 | 2.30 | 4.00 | 7.50 | 4.00 | 4.00 | 4.00 | 3.00 | 3.00 | 4.00 | 4.50 |
| Flushtnk appliances. 10 " .... | 20.00 | 50.00 | 25.00 | 25.00 | 30.00 | 15.00 | 50.00 | 23.50 | 20.00 | 40.00 | 26.00 | 16.00 | 31.00 | 20.00 | 25.00 | 30.00 | 30.00 |
| Stone riprap ..... 52 cu. yds. | 1.75 | 2.50 | 2.00 | 1.50 | 3.00 | 1.00 | 1.50 | 1.50 | 1.25 | 1.75 | 2.75 | 2.00 | 3.00 | 2.00 | 2.00 | 1.50 | 2.50 |
| Total .....| $26,878 | $30,860 | $23,459 | $29,502 | $38,215 | $29,179 | $30,870 | $25,110 | $24,350 | $29,856 | $33,457 | $23,432 | $31,185 | $29,492 | $28,445 | $29,040 | $35,534 |

Note.—Four items, (G), (H), (J) and (U) are double items—only two, i. e., 18-in. wooden outlet pipe, 18-in. cast-iron outlet pipe, one selection; 20-in. wrought iron (R. R.), 20-in. cast-iron (R. R.) the city's selection, are to be selected.

ASPHALT PAVING.—Rochester, N.Y.—The following bids were received by the executive board June 14, 1898, for asphalt paving in Linden and Yale Sts., estimated cost, $20,850; contract awarded Warren-Scharf Asphalt Paving Co.:

| Quantities. | Warren-Scharf Asp. Pav. Co., $18,524. | Whitmore, Rauber & Vicinus, $18,821. | Rock Asp. Pavement Co., $18,864. | Rochester Vulcanite Pavmt Co., $18,866. |
|---|---|---|---|---|
| Pavement: | | | | |
| Stone, new Medina blk 525 sq. yds. | $2.50 | $2.90 | $2.90 | $2.85 |
| New Trinidad* .....5,775 " " | 2.25 | 2.20 | 2.20 | 2.25 |
| New 4-in. curbstone....5,250 lin. ft.. | .46 | .47 | .45 | .45 |
| Sewers: | | | | |
| Main pipe, cleaned...1,920 " " | .15 | .20 | .25 | .20 |
| New surface ..... 20..... | 25.00 | 29.00 | 28.00 | 19.00 |
| Repairing & con'ect'g 2..... | 18.00 | 18.00 | 23.00 | 15.00 |
| New lot laterals†..... 40..... | 6.00 | 8.80 | 9.00 | 9.00 |
| New manholes ..... 7 each... | 35.00 | 34.00 | 42.00 | 45.00 |
| Water serv. pipes, etc.‡ 5 each... | 8.10 | 7.80 | 8.75 | 9.50 |
| Water serv. pipes, etc.‖ 35 " ... | 12.96 | 14.20 | 14.00 | 14.00 |

*Sicily rock asphalt. †Each 12 ft. long. ‡Water service pipes with fixtures, North Side, 4 ft. long. ‖Water service pipes with fixtures, South Side, 19 ft. long.

GRADING, ETC.—Cohoes, N. Y.—The following bids were received last week for grading in several streets: Eveline & Denallo, Waterford, N. Y., hard rock, $1 a cu. yd.; loose rock, 50 cts.; earth, 29 cts. John W. Flynn Waterford, solid rock, $1.15; loose rock, 95 cts.; earth, 34 cts. Houlihan & Larkin, solid rock, 90 cts.; loose rock, 64 cts.; earth, 30 cts. A. H. Hildreth, solid rock, 62 cts.; loose rock, 30 cts.; earth, 15 cts. Warner & Madigan, Mechanicsville, N. Y., solid rock, 94 cts.; loose rock, 57 cts.; earth, 33 cts.

BRICK PAVING.—**Troy, N. Y.**—M. J. Jackson & Son have been awarded the contract for paving 9th St. with Mack brick, at $1.94 a sq. yd.; total cost, $21,400.

wood, 53 cts. to 58 cts. a lin. ft.; brick paving, M. E Billings, a half square, 63 cts a sq. yd.

PAVING AND SEWERS.—**Meadville, Pa.**—We are informed that the following bids were received June 29, 1898, for building a pipe storm sewer and for paving, as advertised in Engineering News; D. T. McKay, Jr., Cy. Clk.:

Bids Received at Meadville, Pa., June 29, 1898, for Paving and Pipe Storm Sewer.

| Items and quantities. | *Peter Schenck, Butler, Pa. | James McAffee & Co., Allegheny, Pa. | Osborn & Fredericks, Franklin, Pa. | Sheehan & McGahn, Bradford, Pa. | Ross & Robinson, Meadville, Pa. | Thomas McGulgan, Meadville, Pa. |
|---|---|---|---|---|---|---|
| Brick paving, concrete foundation, 11,160 sq. yds. { Mack ..... { Wire-cut..... | $1.34 | $1.33½ | ..... | ..... | $1.47½ | $1.48 |
| { Repressed..... | .... | 1.40 | ..... | ..... | 1.47½ | 1.53 |
| { Block..... | 1.39 | 1.43 | ..... | ..... | 1.47½ | ..... |
| { Park ..... { Wire-cut..... | 1.29 | 1.26 | ..... | $1.40 | 1.43½ | 1.43 |
| { Repressed..... | .... | 1.34 | ..... | 1.45 | 1.43½ | 1.48 |
| { Brady Run..... { Wire-cut..... | 1.33 | 1.31 | ..... | 1.45 | 1.45 | 1.47 |
| { Repressed..... | .... | 1.37 | ..... | 1.49 | 1.45 | 1.52 |
| { Franklin ..... { Wire-cut..... | 1.29 | 1.29 | ..... | .... | 1.46 | 1.43 |
| { Repressed..... | .... | 1.30½ | $1.40 | .... | 1.46 | 1.47 |
| 5x26-in. curbing, including cors....2,640 ft. { Natural flag.. | .42 | .50 | .50 | .48 | .45 | .50 |
| { Sandstone.... | .42 | .45 | .45 | .40 | .44 | .48 |
| 5x22-in. curbing, including cors.... 482 ft. { Natural flag.. | .38 | .45 | .50 | .48 | .45 | .48 |
| { Sandstone.... | .38 | .43 | .35 | .40 | .44 | .42 |
| 4x18-in. crossing curb ..... 190 ft. Natural flag.. | .30 | .30 | .40 | .28 | .30 | .36 |
| 2½x12-in. edgestones ..... 750 lin. ft.. | .20 | .20 | .30 | .25 | .15 | .12 |
| Castings, inlets, gutter plates, etc. .....7,900 lbs..... | .01¾ | .02 | .... | .01¾ | .02½ | .01¾ |
| Catchbasins, standard ..... 4 each... | 25.00 | 24.00 | 25.00 | 23.00 | 18.00 | 30.00 |
| " special top ..... 7 " ... | 34.00 | 35.00 | 35.00 | 33.00 | 26.00 | 30.00 |
| 18-in. storm sewer ..... 380 lin. ft.. | .65 | .80 | .52 | .60 | .50 | .55 |
| 15-in. " " ..... 420 " " | .46 | .70 | .37 | .55 | .45 | .45 |
| 12-in. " " ..... 260 " " | .35 | .65 | .32 | .45 | .34 | .35 |
| 10-in. " " ..... 240 " " | .31 | .55 | .29 | .30 | .28 | .30 |
| 4-in. underdrain ..... 100 " " | .12 | .10 | .23 | .06 | .07 | .10 |
| Total ..... | $18,638 | $19,359 | $20,024 | $20,454 | $20,462 | $20,671 |
| Days to complete ..... | 100 | 90 | 120 | 90 | 90 | 140 |

*Awarded contract for Park brick.

block paving, $1.52 a yd.; 830 sq. yds. vitrified brick sidewalk, 45 cts. a sq. yd.; 1,000 lin. ft. curbing, 45 cts. a ft.; 300 lin. ft. crossing stone, 65 cts. a ft.; 150 cu. yds. masonry, $3.95 a yd.; 20 lin. ft. iron fence, $1.00 a ft. Total, $4,390.

## ENGINEERING MATERIAL PRICES.

**TRACK MATERIALS—**

New York—Angle bars, 1.05 cts. to 1.10 cts.; spikes, 1.40 cts. to 1.50 cts.; track bolts, hexagonal, 1.80 cts. to 1.85 cts.; square, 1.60 cts. to 1.75 cts.

Chicago—Angle bars, 1.15 cts. to 1.25 cts.; spikes, 1.50 cts. to 1.60 cts.; track bolts, hexagonal, 1.90 cts. to 2.00 cts.; square, 1.80 to 1.90 cts.

**RAILS, STEEL—**

New York, new, $18.00 to $19.00; old iron, $11.00 to $11.50; old steel $9.00.
Chicago, new, $20.00 to $22.50; old iron, $12.25 to $12.50, steel, $10.50 to $11.00.
Pittsburg, new, $18.00; old iron, $13.50; steel, $10.50.

**STRUCTURAL STEEL—**

New York—Beams, 1.30 cts. to 1.35 cts.; channels, 1.30 cts. to 1.35 cts.; tees, 1.35 cts. to 1.40 cts.; angles, 1.15 cts. to 1.20 cts.; plates, 1.20 cts. to 1.30 cts.; rivets, iron, 2.25 cts. to 2.50 cts.; steel, 1.75 cts. to 1.85 cts.; universal mill plates, 1.15 cts. to 1.20 cts.; tank, 1.25 cts. to 1.30 cts.; shell, 1.25 cts. to 1.30 cts.; flange, 1.60 cts. to 1.75 cts.; firebox, 2.25 cts. to 2.50 cts.

Chicago—Beams, 1.30 cts. to 1.35 cts.; channels, 1.30 cts. to 1.35 cts.; tees, 1.35 cts. to 1.40 cts.; angles, 1.20 cts. to 1.25 cts.; universal mill plates, 1.25 cts. to 1.30 cts.; tank, $1.10 cts. to 1.20 cts.; shell, 1.45 cts. to 1.55 cts.; flange, 1.20 cts. to 1.40 cts.; firebox, 1.85 cts. to 5.00 cts.

Pittsburg—Beams, 1.15 cts. to 1.25 cts.; channels, 1.15 cts. to 1.25 cts.; tees, 1.20 cts. to 1.20 cts.; angles, 1.05 cts. to 1.15 cts.; universal mill plates, 1.00 cts. to 1.10 cts.; tank, 1.10 to 1.15 cts.; shell, 1.15 cts.; flange, 1.10 cts. to 1.20 cts.; firebox, 2 cts. upward.

**MERCHANT STEEL—**

Machinery, per lb., 1.60 cts. to 1.70 cts.
Cast, best in small lots, per lb., 7 cts.
Sheet, per lb., 8.5 cts.

**IRON—**

**Pig Iron:**

New York, No. 1, $11.00 to $11.50; No. 2, $10.75 to $11.00.
Chicago, No. 1, $11.50 to $12.00; No. 2, $11.00 to $11.50.
Pittsburg, No. 1, $10.40 to $10.50; No. 2, $10.00 to $10.25.

**Bar Iron:**

New York, common, 1.08 cts. to 1.15 cts.; refined, 1.15 cts. to 1.20 cts.
Chicago, common, 1.05 cts. to 1.10 cts.; refined, 1.10 cts. to 1.20 cts.

**Sheets:**

American, per lb., 4 cts. to 4½ cts.
Russia, per lb., 10¼ cts. to 10½ cts.

**LUMBER—**

**New York:**

Hemlock timber, 20 ft. and under, per M, $12.00 to $12.50.
Piling, Eastern spruce, 35 to 40 ft., 30 to 40% 12-in. butts, 4¾ cts. to 4½ cts.
Spruce, special cargoes, per M, $15.00 to $17.50.
Yellow pine, random cargoes, $14.50 to $17.00.
North Carolina pine, $2.25 to $2.40 advance over Norfolk rates.

**San Francisco:**

Oregon pine, per M, $15.50 to $17.50.
Redwood, per M, $17.00 to $19.00.
Redwood tank stock, up to 10 ft., $21.00 to $24.00.

**GENERAL MATERIALS—**

Lead, New York, 3.75 cts. to 3.80 cts.
Nails, Pittsburg, 1.40 cts.
Solder, per lb., 9 cts. to 11½ cts.
Spelter, per lb., 4.00 cts. to 4.30 cts.
Copper, ingots, 11.50 cts. to 12.00 cts.
Granite, rough, New York, cu. ft., 40 cts. to 50 cts.
Limestone, New York, cu. ft., 70 cts. to 80 cts.
Ohio freestone, New York, cu. ft., 85 cts. to 90 cts.
Slate, Penn. block, per square, $4.00 to $5.00.
White lead, American, per lb., 5½ cts. to 6 cts.
Lime, common state, per bbl., 70 cts.

## INDUSTRIAL NOTES.

THE AMERICAN PIPE & FOUNDRY CO., Chattanooga, Tenn., has appointed Mr. Lester E. Wood, 100 Broadway, New York, Eastern Sales Agent.

CRAGE & TENCH, 61 Terrace, Buffalo, N. Y., have the contract for the Millstone extension of the Tionesta Valley Ry., running south from Sheffield, Pa.

THE TURNER ENGINEERING CO., Marion, O., has received an order for two 100-HP. Turner water tube boilers for a college building in Philadelphia.

THE W. S. DICKEY CLAY MFG. CO., Kansas City, Mo., has a contract for 300 carloads of sewer pipe for use in Guadalajara, Mex., at a cost of $80,000, according to report.

THE NILES TOOL WORKS, Hamilton, O., is reported to have purchased a large interest in the Pond Machine Tool Co., Plainfield, N. J. The companies will not be consolidated, but it is said that there will be a co-operation by which the shipping and other like expenses will be reduced. It is also reported that the new tool works in Berlin, Germany, to be known as the Deutsche Niles Werkzeng Machinen Fabrik, will be owned by these two companies.

THE WESTINGHOUSE ELECTRIC & MFG. CO., Pittsburg, is reported to have a contract from the Anniston Consolidated St. Ry., Anniston, Ala., for electrical machinery for the operation of the road, amounting to about $350,000. The contract includes over 200 Westinghouse street railway motors and two large dynamos. A contract has also been received, it is stated, from the Consolidated St. Ry., Baltimore, Md., for 60 Westinghouse street railway motors, at a cost of $50,000.

THE D. A. TOMPKINS CO., Charlotte, N. C., has closed a contract, through Guthrie & Rockwood, Buffalo, N. Y., engineers, for a sewage disposal plant on Waring's system of forced bacterial oxidation, to be installed at the Western Refuge for Women, Albion, N. Y. The plant will have a capacity of 25,000 gallons a day, but, it is claimed, purifies the sewage to the standard of drinking water, the effluent being discharged into a small brook which otherwise is dry in summer. Mr. W. L. Church, 282 Manhattan Ave., is the Resident Engineer of the company in New York.

THE JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J., has placed on the market a solid belt dressing in round bars, about 8 ins. long and 2 ins. in diameter, making a package convenient to the hand and easy to apply even to fast running belts. It is not claimed that this solid dressing is as good a preservative of the life and elasticity of the belt as the Dixon paste, as the object has been to meet the demand for a more convenient form of belt dressing and one which may be quickly applied.

THE BERLIN IRON BRIDGE CO., East Berlin, Conn., has designed and is erecting for the Syracuse Construction Co., Syracuse, N. Y., new buildings in connection with its electric railway plant, consisting of a fireproof boiler house, 60 x 80 ft., having steel framework covered with corrugated iron on the sides and roof; an engine room 65 x 80 ft., with a steel frame and brick sides, and a car-barn and repair shop, 65 x 170 ft., of steel framework construction, with corrugated iron sides.

THE GENERAL ELECTRIC CO., Schenectady, N. Y., at a directors' meeting last week, voted to recommend to the stockholders a reduction in the share capital of the company, both common and preferred, of 40%, so that each holder of one hundred shares of present stock will get 60 shares of the new. On the basis of the new capitalization $1,275,000 will be required annually to pay 7% upon the preferred stock and 6% upon the common stock. A stockholders' meeting will be held Aug. 10, at noon, in Schenectady.

THE VULCAN IRON WORKS CO., Toledo, O., has recently secured several large orders and is about to ship five steam shovels to Ogdensburg, N. Y., for use in constructing a large water trench, 50 ft. deep, 150 ft. wide and 4 miles long, with a fall of 60 ft., which taps the St. Lawrence River and is then turned into Grass Creek. This work is being done by an English syndicate, at a cost of $2,000,000. Among other orders are two steam shovels for use in phosphate beds near Charleston, S. C., where several have been previously shipped; also a shovel to the Northwest and one to Pittsburg.

THE BOSTON & LOCKPORT BLOCK CO., 142 Commercial St., Boston, through its President, Mr. Albert D. Bosson, together with the Treasurer, Mr. Myron H. Tarbox, constituting a majority of the Executive Committee, has purchased from the assignees of the Bagnall-Loud Block Co., a Maine corporation, organized in 1893, of which Mr. Robert M. Barnard was President, and Mr. Herbert Loud, Treasurer, all the latter's stock, manufactured and in process, and the machinery, patterns, etc. The finished stock will be at once removed to the store and the balance to the factory at East Boston.

ANDREW J. MORSE & SON, 138 and 140 Congress St., Boston, Mass., report that their diving apparatus, complete for two divers under one pump, has been made the official standard by the Navy Department and sample sets are kept at all naval stations. Since the "Maine" disaster they have supplied what are claimed to be the largest requisitions ever issued by the government for diving apparatus and have delivered and have under construction about 75 sets of the new standard style. They have also supplied their "U. S. Navy" outfits to the new Japanese cruisers "Chitose" and "Kasagi," and for the past three months have been forced to work night and day, including Sundays, to meet the demands of the Navy Department.

THE S. FLORY MFG. CO., Bangor, Pa., has been running its works day and night since last November to keep up with orders for its hoisting engines and suspension cableways. Recently several carloads of engines have been shipped, including one for export to Kobe, Japan, and two carloads of dredging machinery and one of portable hoisting engines to Boston, Mass. The demand for hoisting and conveying machinery has made necessary an increase in the working capacity of the plant. Within the past few months the company has erected four cableways, among them being one for the Empire State Granite Co., Pochuck, N. Y. The quarry is on a hill, about 400 ft. above the yard and railway, and the cableway has a clear span of 900 ft. between the towers, with an individual load capacity of 15 tons. The plant is operated by a 75-HP. Flory special cableway hoist, fitted with two friction drums, and reversible link motion and an 80-HP. boiler of the locomotive type. Formerly the stone was handled by swinging it from derrick to derrick until the yard was reached, which was laborious, slow and expensive. With the cableway the stones are conveyed at a speed of 700 ft. a minute, if desired.

THE AMERICAN WHEELOCK ENGINE CO., Worcester, Mass., and Postal Telegraph Bldg., New York, reports the following recent installations of the Greene-Wheelock engine: Six 1,500-HP., with rope dirves, Chicago City Ry.; one 600-HP. single-cylinder condensing, Worcester (Mass.) wire mill; one 200-HP., Hammond-Reed Co., Worcester, Mass.; one 1,000-HP., B. B. & R. Knight, Providence, R. I.; one 550-HP. single-cylinder and one 550-HP. cross-compound, with rope drives, Syracuse Construction Co., Syracuse, N. Y.; one 400-HP., Willamette Pulp & Paper Co., Oregon City, Ore.; one 300-HP. and one 350-HP., Pejepscot Paper Co., Brunswick, Me.; one 750-HP. direct-connected, New York Heat, Light & Power Co., New York; three 350-HP. direct-connected, J. G. White & Co., New York; two 500-HP. cross-compound, direct-connected, Potomac Electric Power Co., being the second order; the previous order being for two 750-HP. direct-connected engines. The company has installed at the Grosvenordale electric light plant, Grosvenordale, Conn., the high-pressure side of a cross-compound engine, putting its cylinder and valve gear onto a Corliss bed and replacing Corliss cylinders. This is the second Corliss engine in that plant that has been replaced with the Greene-Wheelock cylinder and valve gear. The company is now building for the Bibb Mfg. Co., Macon, Ga., the high-pressure side of a 750-HP. cross-compound, the low-pressure side to be a Greene-Wheelock, low-pressure cylinder with valve gear, replacing the present Corliss cylinder and valve gear.

NEW COMPANIES.—Belvedere Brewing Co., Harpers Ferry, W. Va.; $80,000, commencing with $40; August Kruger, Jacob Schafer, Henry Schafer and Eva Schafer, Harpers Ferry; Elias Hiney, Charlestown, W. Va.

Independent Telephone Co., Lititz, Pa.; $25,000; to operate lines in Lancaster, Berks and Lebanon counties; Israel G. Erb, H. R. Landis, A. M. Amer, P. B. Bucher and A. B. Long, Lititz; E. B. Brubaker, Lexington, Pa.; S. B. Erb, Millway, Pa.; E. L. Garber, Stevens, Pa.; S. W. Buch, Kissel Hill, Pa.; M. L. Weidman, Ephrata, Pa.; Jacob Mace, Reamstown, Pa.; Philip F. Ruhl, Brickerville, Pa.; A. E. Lane, Brunnerville, Pa.

Citizens' Telephone Co., Cambridge City, Ind.; $10,000; James A. Boyd, John W. Marson, John R. Mauk, Horace B. Boyd, Conrad B. Keller, Cornelius T. Wright, George Bridenbucker, Albert W. Bradbury and Wm. B. Barefoot.

Atlantic Coast Telephone Co., Atlantic City, N. J.; $100,000; Edwin L. Reinhold, of Marietta, Pa., and Lewis Kuehnie and James B. Relley, of Atlantic City.

Pittsburg & Allegheny Telephone Co., of Pittsburg, Pa.; to build a telegraph line in Allegheny county for police and fire alarms and messenger business; L. H. Matthews, John F. Freeman, Pittsburg; John Phelps, Baltimore, Md.

Rural Telephone Co.; $3,000; to maintain a telephone line connecting various towns in Westchester county; Pres., R. S. Haviland; Samuel Thompson, and Treas., C. W. Page, of Chappaqua, N. Y.; W. H. Moore, H. E. Washburn; Secy., G. G. Norton and T. B. Pierce, of Pleasantville, N.Y.

Hicksville Telephone Co.; $10,000; to operate a telephone system at Hicksville, O.; Ed. L. Barber, Frank B. Ufer, W. A. Barber, C. E. Brigham and J. C. King.

Star Mfg. & Chemical Co., Syracuse, N. Y.; $1,000,000, commencing with $50; to conduct a general commercial business; G. O. Chilton, Chas. W. Shith, D. M. Black, C. H. Carwithin and H. H. White, all of Charleston, W. Va.

Henry W. Belcher Co., Jersey City, N. J.; $100,000, commencing with $1,000; to manufacture iron, steel, brass, etc.; James W. Newton, John J. O'Brien and Henry W. Belcher, all of 243 Washington St., Jersey City.

Pridham Sewerage Utility Co., Newark, N. J.; $100,000, commencing with $5,000; to treat and deodorize all kinds of sewerage; Samuel S. Pridham, Paul Buchanan and Ludwig F. Mergott, of Newark; John Whitehead, Morristown, N. J.

General Electric Automobile Co., Philadelphia, Pa., $2,500,000, commencing with $2,500; to acquire electrical appliances and to do a general manufacturing business; A. B. Pearson, Clarence E. Lent, J. E. Lewis, T. R. Heller and C. W. Cox, all of Philadelphia.

Asphalt and Rubber Supply Mfg. Co., New York; $600, commencing with $50; to manufacture insulating materials, etc.; W. C. Snell, N. J. Hatcher, A. F. Vickers, D. M. Black and A. C. Gunther, all of Charleston, W. Va.

U. S. Steel Cement Co., New York; $1,000,000, commencing with $2,500; to manufacture and sell cement; Geo. F. Averill and Everett Clapp, New York; H. F. Cook, Sag Harbor, New York; Wm. B. Hill and Alexander Cameron, Brooklyn, N. Y.

Mohawk Mfg. Co., Cincinnati, O.; $1,000,000, commencing with $5,000; to conduct a general manufacturing business; G. F. Klotter, Wm. C. Tieman, Geo. H. Stout, E. L. Dillinger and W. M. Berry, all of Cincinnati.

Automatic Incubator Co., Philadelphia, Pa.; $1,000,000, commencing with $1,000; A. A. Freeman, J. K. Freeman, D. L. Busby, Geo. R. Morehouse and Ogden Armstrong, all of Philadelphia.

Frictionless Bearing Co., New York; $1,000,000, commencing with $1,000; to manufacture and deal in bearings; Geo. P. Smith and Chas. L. Turey, New York; James Sawyer, Jr., Stamford, Conn.; Alexander Cameron and Wm. B. Hill, Brooklyn, N. Y.

McManus Contracting Co., Bordenton, N. J.; $25,000, commencing with $5,000; to construct bridges, buildings, etc.; Michael McManus, 1416 Tioga St., and Louis P. Riedenauer, 2236 Jefferson St., of Philadelphia, Pa.; John H. Ayres, Bordenton.

United States Battery & Electrical Mfg. Co., Jersey City, N. J.; $100,000, commencing with $1,000; to manufacture storage batteries, motors, etc.; Conrad N. Jordan and Louis Lieber, New York; W. M. McDougall, East Orange, N. J.

Empire State Rubber Shoe Co., New York; $300,000, commencing with $50; R. W. Fowler, Wm. A. Towner, Frederick Ferris, J. E. Fryer and Darwin Rudd, all of New York.

United States Ball Bearing Co., Elkins, W. Va.; $1,000,000, commencing with $2,500; to manufacture all kinds of anti-friction devices; J. J. Humphill and C. M. Fulton, Washington, D. C.; B. F. Taylor, Elkins; J. D. Richerson, Murfreesboro, Tenn.; W. A. Jones, Warsaw, Va.

Writing Machine Co., New York; $500,000, commencing with $50; to manufacture and deal in typewriting machines and parts thereof; J. T. Williams and N. H. Lucken, Brooklyn, N. Y.; H. F. Frevert, J. M. Creary and Ida C. White, New York.

Compressed Steel Co., 22 Clinton St., Newark, N. J.; $400,000, commencing with $1,000; to manufacture steel, etc.; Henry Dickson and Peter Hassinger, Newark; A. H. Ryan, Chas. F. Spaulding, Frank R. Wickes, A. A. Richmond and Edward E. Bruen, East Orange, N. J.

James P. McDonald Contract Co., 83 Montgomery St., Jersey City, N. J.; $10,000, commencing with $1,000; to build and repair railways, etc.; Frederick Dwight, 10 Wall St.; Frank E. Randall, 80 Broadway, both of New York; John J. Treacy, 446 Third St., Jersey City.

Acme Portland Cement Co., 419 Market St., Camden, N. J.; $1,000,000, commencing with $1,000; to manufacture cements of all kinds; T. H. Wheeler, Orange, N. J.; Wm. M. McKeloy, John Marshall Lockhart, and Chas. E. Pope, of Pittsburg, Pa.

Boston & Costa Rica Land & Investment Co., Jersey City, N. J.; $100,000, commencing with $21,000; H. F. Hatch, William Fillingham and E. G. Maturin, 60 Grand St., Jersey City.

Philadelphia Big Four State Syndicate, Camden, N. J.; $50,000, commencing with $3,000; to quarry slate, stone, etc.; Peter M. Mathieu, J. Wm. Mathieu, Henry A. Mathieu and Geo. H. B. Martin, 419 Market St., Camden, N. J.

Harry C. Nichols Co., Camden, N. J.; $25,000, commencing with $1,000; deal in real estate, and to build houses, water-works, etc.; Wm. S. Darnell, Camden; Joseph L. Dailey and Harry C. Nichols, Philadelphia, Pa.

Cory Tidewater & Improvement Co., Jersey City, N. J.; $100,000, commencing with $50,000; to build docks, wharves, etc.; Herbert D. Cory, David U. Cory and Stuart Lyman, all of Englewood, N. J.

Cleveland Electric Co., Cleveland, O.; $75,000, commencing with $450; to manufacture and deal in all kinds of electrical devices; Wm. P. Bowman, F. C. McMillin, J. E. Mathews, F. W. Root and N. C. Stevens, all of Cleveland.

Rapid Transit Construction Co., New York; $5,000,000, commencing with $1,000,000; to build a rapid transit railway in the Borough of Manhattan; J. W. Reno, I. P. Smith, J. D. Adams, J. B. Bissell and C. A. L. Massie, all of New York.

Wilson Mfg. Co., New York; $35,000, commencing with $60; to manufacture and sell scales, tug links, etc.; E. K. Barber, Keesville, N. Y.; R. P. Wilson, East Orange, N. J.; R. E. Oatman, John Leighton and W. W. Tucker, New York.

Miller Car Refrigerating Co., Charleston, W. Va.; $250,000, commencing with $5,000; to build and equip refrigerator cars; G. D. James, Thomas Watson, E. W. Small and E. D. Poor, New York; C. S. Miller, Tiffin, O.

Fairmont Glass Works, Fairmont, W. Va.; $50,000, commencing with $5,500; to manufacture glass, etc.; Z. G. Morgan, J. M. Hartley, J. M. Crane, O. S. McKinney, and M. L. Hutchinson, all of Fairmont.

Linomatrix Co., Washington, D. C.; $5,000,000, commencing with $50; to deal and own letters patent pertaining to matrix-making, lino-typing, stereotyping, etc.; Stilson Hutchins, E. V. Murphy and C. T. Moore, Washington; J. O. Clephane and Andrew Devine, New York.

New York Finance & Construction Co., Jersey City, N. J.; $100,000, commencing with $25,000; to conduct a general construction business; Lee W. Woolston, 141 Broadway, New York; Geo. F. Woolston, Arlington, N. J.; Geo. F. Woolstron, Jr., Pittsburg, Pa.

Nearly Every Prominent Contractor and Manufacturer of Contractors' Supplies READS ENGINEERING NEWS

AVAIL YOURSELF OF THIS PAPER WHEN BIDS ARE WANTED FOR CONSTRUCTION OR FOR FURNISHING SUPPLIES